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GENERAL STUDIES (TEST CODE : 1513)

Name of Candidate	Khushhali Solanki		
Medium Eng./Hindi	English	Registration Number	1214161
Center		Date	

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
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9	10	
10	10	
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12	15	
13	15	
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16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न–सह–उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

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EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

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1. In the context of protection of monuments, explain the role of the Archaeological Survey of India (ASI). Also, comment on the challenges faced by ASI and measures taken to address these. **(150 words) 10**

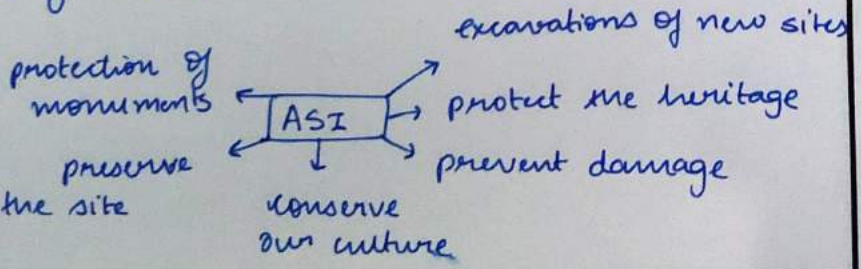
स्मारकों के संरक्षण के संदर्भ में, भारतीय पुरातत्व सर्वेक्षण (ASI) की भूमिका की व्याख्या कीजिए। साथ ही, ASI द्वारा सामना की जाने वाली चुनौतियों और उनसे निपटने के लिए किए गए उपायों पर टिप्पणी कीजिए।

Answer: The Directive principles (Article 49) calls for protection of monuments and heritage sites. ASI (Archaeological Survey of India) under ministry of culture is formed to fulfil the same purpose.

The role of ASI includes -

1. Discovery of new sites and excavation. For eg - Dungadevi site in Odisha. It then focuses our attention to conserve the same.

2. It co-ordinates with UNESCO from India's side. The world heritage status sites are then required to be protected, preserved and being conserved.



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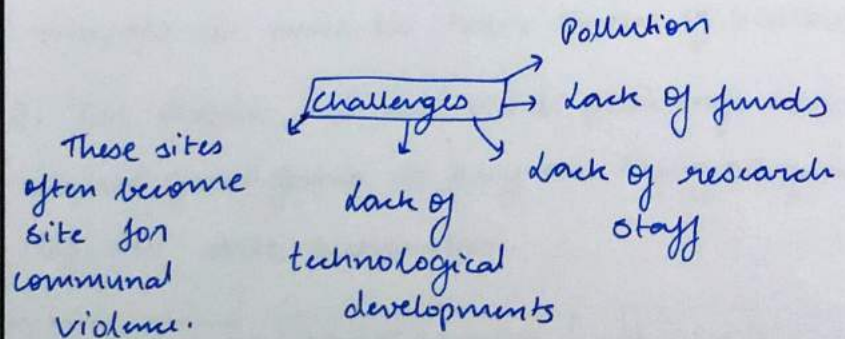
However, it faces certain challenges that requires urgent adressal such as -

1. Pollution (Air, Water, Noise) - The smog thus formed results into acid rains. This has even destroyed the shine of Taj Mahal's marble.

2. The recently discoved site in Andhra Pradesh - 'Erra Matti Diebba' is not paid enough attention by the authorities. It continues to lose it's value.



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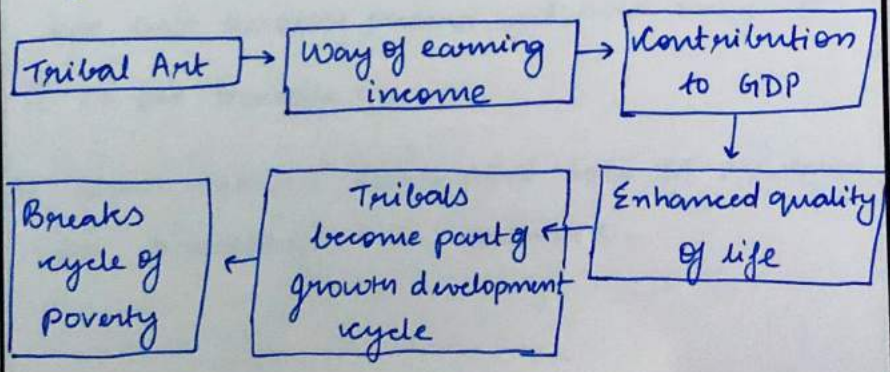
2. Tribal art has a huge potential for acting as an economic resource and a tool for socio-economic transformation of tribals in India. Elucidate. Also highlight the challenges in this context. **(150 words) 10**

जनजातीय कला में भारत में जनजातियों के सामाजिक-आर्थिक परिवर्तन के लिए एक आर्थिक संसाधन एवं एक उपकरण के रूप में कार्य करने की असीम क्षमता है। स्पष्ट कीजिए। साथ ही, इस संदर्भ में विद्यमान चुनौतियों को भी रेखांकित कीजिए।

Answer : Recently, the government of Jharkhand has renovated it's airports with help of 'Sohrai Kovar' paintings. This has earned them a great recognition as it is provides livelihood to tribes of Jharkhand.

1. Tribal art in forms of paintings, rock cut architecture, leaf designs, rice paints, murals etc serve as their source of livelihood.

2. The Rogan Art and Worli paintings have earned great fame as they are being recognised by state authorities.



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Socio-economic transformation
- → Better education for their children
- → Better market reach and internationalisation of their work
- → Their vulnerability reduces
- → Gini co-efficient falls

The challenges faced in this regard :-

1. Lack of recognition to their artwork - It is often found that they are not given enough attention to their artwork.

2. Less price realisation - The Monpa papers made by Tribes of Arunachal Pradesh are the best quality papers yet sold only at ₹ 60 per bundle.

3. Lesser market reach and lack of avenues for branding their artwork.

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3. Though the Government of India Act, 1919 proposed some radical administrative changes, it remained short of fulfilling aspirations of Indians. Elaborate. **(150 words) 10**

यद्यपि भारत सरकार अधिनियम, 1919 ने कुछ मौलिक प्रशासनिक परिवर्तनों का प्रस्ताव किया, तथापि यह भारतीयों की आकांक्षाओं को पूरा करने में असमर्थ रहा। सविस्तार वर्णन कीजिए।

Answer : The Government of India Act (GOI) 1919 also known as Montague Chelmsford Reforms. They were passed to placate the miseries of Indians in the background of Home Rule movement.

The radical administrative changes proposed are -

1. It provided for increased reservation to minorities - Sikhs, Anglo Indians, Christians etc.

2. It expanded the members in both provincial and central assemblies. It gave more representation to Indians.

3. It advocated for reserved list and transferred list subjects. The Indian members can now make laws on transferred subjects.

4. However, they did not fulfill the Indian aspirations, because -

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1. The Governor was vested with ultimate powers and he can impose his rule during breakdown of administrative machinery.

2. Indians were still not allowed to vote on budgetary provisions and also those concerning foreign affairs or communication

3. Even when the bureaucracy was now required to work with politicians, but on ground reality it did not occur.

4. It increased the fissures in Indian society and propagated the 'divide and rule policy' further.

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4. Often deemed as the 'forgotten conflict', the Korean War had far-reaching implications. Elucidate. **(150 words) 10**
प्रायः 'विस्मृत संघर्ष' के रूप में ज्ञात कोरियाई युद्ध के दूरगामी प्रभाव थे। स्पष्ट कीजिए।

Answer : The Korean war was fought in 1950's between what is now recognised as North and South Korea.

It is pertinent to note that the war has not yet stopped officially but is on a pause as per the treaty signed. That's why it is deemed as forgotten conflict.

1. India played an important role along with USA in temporarily stopping the conflict.

2. North Korea, already in Black List of FATF (Financial Action Task force) is now engaging in making supersonic missiles. This has re-started the nuclear arms race.

3. The nuclear arms race has led to strengthening of relations between South Korea, USA and Japan. They have GSOMIA (General Security and Military Information Exchange Agreement).

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4. The world is now getting divided into 2 blocks marked by Pakistan, China, North Korea on one hand and QUAD+ on other. (QUAD+ = USA, India, Japan, Veitnam, South Korea, Australia).

This has no doubt increased threat for India as it's neighbours stand on opposite end.

Korean conflict →
- Nuclear and weapons race
- Bi-polar world
- Increased expenditure on security of nations
- changing geo-politics of Indo-pacific
- Threat to peace and security
- Human right violations and refugee crisis.

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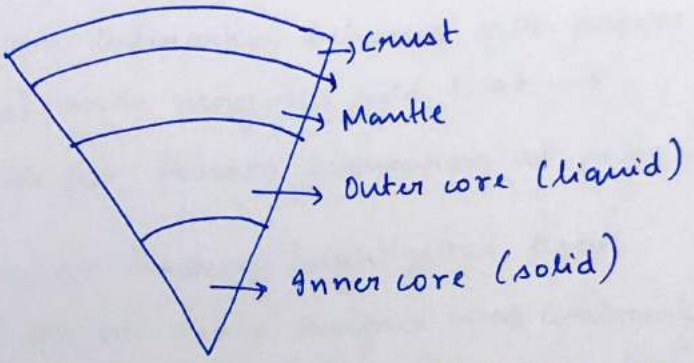
5. Explaining the origin of earth's magnetism, discuss its significance with special reference to its interaction with solar particles. **(150 words) 10**
पृथ्वी के चुम्बकत्व की उत्पत्ति की व्याख्या करते हुए, सौर कणों के साथ इसकी अंतःक्रिया के विशेष संदर्भ में इसके महत्व पर चर्चा कीजिए।

Answer: Earth's magnetism is caused due to liquid outer core being in continuous motion around solid inner core.



The convectional currents that rise in the liquid outer core are responsible for magnetism. It was discovered and confirmed by 'sea floor spreading' theory.

The significance of Earth's magnetism is as follows -

1. It acts as a protective shield against solar winds which otherwise has potential to disturb electronic signals on earth.

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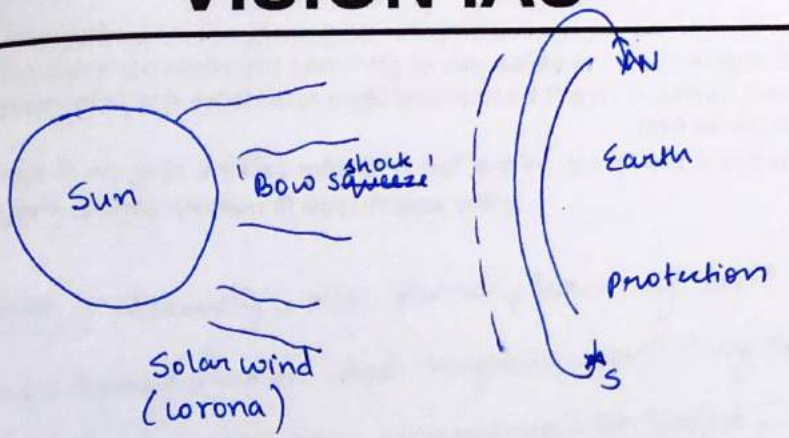

2. It is the interaction between solar particles (photons) with magnetic field that is responsible for Aurora formation at poles.

3. The recent discovery highlighted that sunspot on the sun's surface was continuosly growing in size and was expelling huge magnetic waves towards Earth. This would have destroyed the radio signals and electricity, network etc.

Also, the magnetic field has created a protective layer which otherwise, if absent, could make life impossible to last on Earth due to entry of disastrous UV rays.

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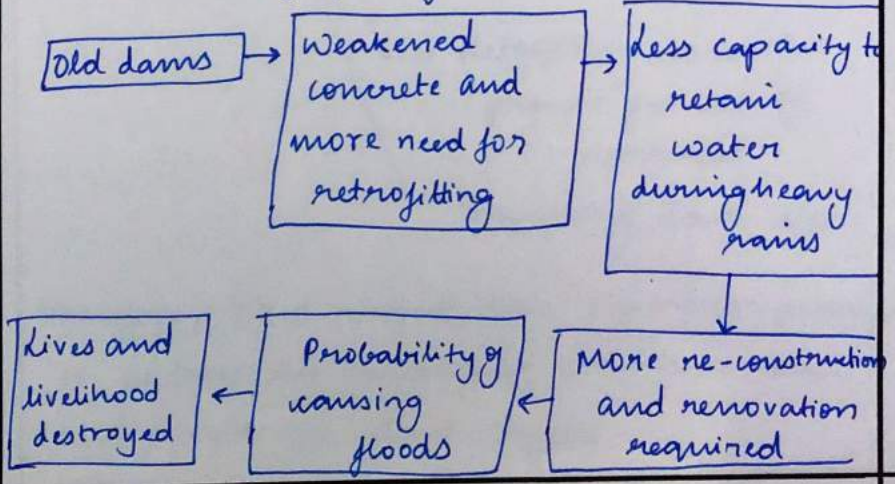
6. Discussing the challenges pertaining to dam safety in India, highlight the potential of Dam Rehabilitation and Improvement Project to address them. **(150 words) 10**

भारत में बांध सुरक्षा से संबंधित चुनौतियों पर चर्चा करते हुए, उन्हें दूर करने के लिए बांध पुनर्वास और सुधार परियोजना की क्षमता पर प्रकाश डालिए।

Answer: Recently, the third phase of DRIP (Dam Rehabilitation and Improvement Program) was launched by the government of India.

This has once again diverted our attention to dam safety in India, given that we have 3rd largest number of dams in world.

1. As per the new report, most of the dams in India are now more than 100 years old. Thereby, their capacity to retain water is drastically getting reduced.



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2. Since, the dams are responsible for emitting methane (a Greenhouse gas), it has the potential to increase global warming and exacerbate climate change issues.

3. Failure of dams and spilling of river water ~~has~~ may prove to be dangerous for people and biodiversity inhabiting the area.

Therefore, DRIP project assumes significance

DRIP project
- → The older dams are to be identified & renovated
- → Greener and stronger materials to be used.
- → Increasing the capacity of dams
- → Retrofitting dams to prevent failure of material
- → Increasing dam life

Therefore, DRIP project has immense potential to address the underlying structural issues and provide for dam safety.

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7. What is understood by Carbon Compensation Depth (CCD)? Discuss the implications of the rise in this depth due to anthropogenic warming as well. **(150 words) 10**

कॉर्बनेट क्षतिपूर्ति गहराई या कार्बन कंपनसेशन डेप्थ (CCD) से क्या अभिप्राय है? साथ ही, मानवजनित तापन (एंथ्रोपोजेनिक वार्मिंग) के कारण इस गहराई में हुई वृद्धि के निहितार्थों की भी विवेचना कीजिए।

Answer: Carbon compensation depth represents the difference in the amount of carbon released by anthropogenic causes and that absorbed by forests.

However, this depth is continously rising because of rapid deforestation and declining forest stocks even in deemed forests.

The implications of rise in this depth includes -

1. Lesser carbon capture and storage will increase carbon dioxide in atmosphere. This is a potent greenhouse gas that is responsible for global warming and climate crisis.

2. Even the increased exploitation of oceans due to anthropogenic reasons is decreasing the blue carbon stocks and releasing it in

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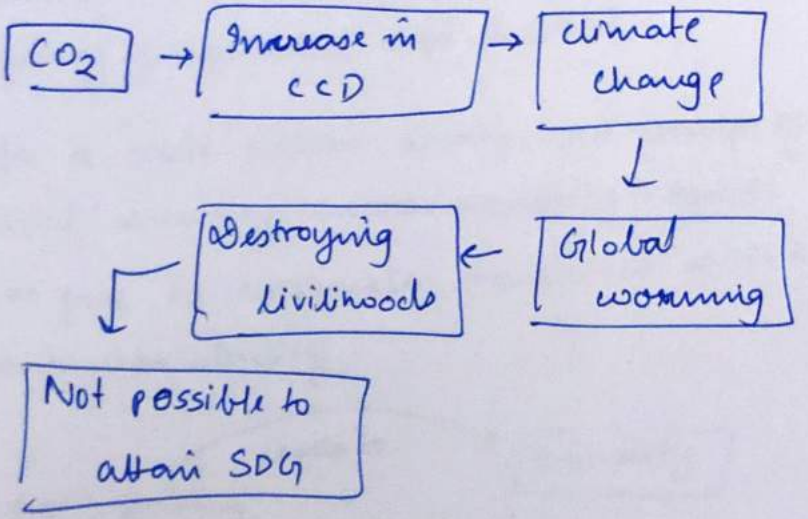
atmosphere.

3. As per the recent report, world will not be able to meet the Paris Agreement if the current emissions continue.



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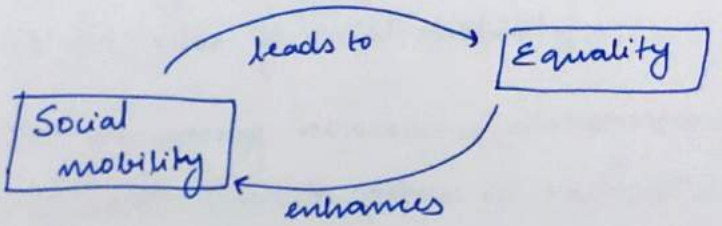
8. Explaining the concept of social mobility and its relationship with equality, mention the impediments in ensuring it. **(150 words) 10**
सामाजिक गतिशीलता की अवधारणा और समानता के साथ इसके संबंध की व्याख्या करते हुए, इसे सुनिश्चित करने में आने वाली बाधाओं का उल्लेख कीजिए।

Answer: 'Social mobility' implies the progressive movement in a society that otherwise is getting fragmented and divided.

1. In a caste ridden society, the concept of social mobility ensures equality. People are free to unshackle themselves with a particular identity.



2. It helps that last person standing in social order to come at the fore front. Thereby enhancing the feeling of OHANA (India as a family where no-one is left behind).

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The impediments in achieving social mobility are as follows -

1. Some closed the doors and others found it closed against themselves (Dr BR Ambedkar). This highlights the grim situation whereby there still exists social discrimination based on caste. This endangers equality.

2. Increasing regionalism - The sons of soil politics being played by the political parties is creating an ideological and geographical rift in idea of social mobility.

3. The increasing communal disharmony in Bangladesh (due to attack on minorities) and in Jammu and Kashmir is creating fissures. This degrades social mobility and enhances social confinement.

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9. In view of demographic changes in recent decades, do you think India needs a two-child policy? Discuss in light of various strands of the debate surrounding this issue. **(150 words) 10**

हाल के दशकों में जनसांख्यिकीय परिवर्तनों को देखते हुए, क्या आपको लगता है कि भारत में दो-बच्चों की नीति (टू चाइल्ड पॉलिसी) की आवश्यकता है? इस मुद्दे से संबंधित बहस के विभिन्न पहलुओं के आलोक में चर्चा कीजिए।

Answer: India is currently under the phase 3 of demographic cycle. Our population is still increasing and our death rates have halted substantially.

Need of a 2 child policy –

1. Due to increasing population, it has over burdened the already depleted resources.

2. The agricultural land is unable to accomodate the disguised employement.

3. It will exacerbate the female infanticide due to son meta preference.

Since, our fertility rate is around 2.2 in 2018, so I think we don't need a 2 child policy as of now.

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Instead, we need to empower women and make them an equal partner in the family planning process.

Other schemes introduced by govt. are more beneficial in this regard -

1. Santhusthi scheme - It calls for sterilisation after 2 children.
2. Prerna strategy - It ~~reduces~~ increases the gap between 2 children.

Anything forced from a top-down approach will result into failure and thereby the involvement of people in policy making regarding this issue needs to be considered.

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10. Globalization is incredibly efficient but has so far been incredibly unjust. Examine the statement in the context of developing countries like India. **(150 words) 10**

वैश्वीकरण अद्वितीय रूप से दक्ष है परन्तु अब तक अत्यधिक अन्यायपूर्ण रहा है। भारत जैसे विकासशील देशों के संदर्भ में इस कथन का परीक्षण कीजिए।

Answer: Globalisation envisages to make the world interconnected in terms of culture, economy, polity, and social issues. It acts as a double edged sword which is incredibly efficient by also unjust for developing countries like India.

1. Greater connectivity with the world – This has led to increase in Foreign direct investments in India enhancing job creation.

2. India has been made a part of Supply chain Resilience initiate. This will divesify our supply chains and reduce the risks.

3. Less labour cost and of raw materials in India – The large MNC's have shifted their bases in India leading to job creation but also increasing emissions.

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However it has also been unjust as-

1. Increased over reliance on China - The pandemic induced weaponisation of supply chains halted the production of even basic amenities in India.

2. Homogenisation of culture - India, being a diverse nation is susceptible to increasing homogenisation of cultures caused by globalisation.

3. The issues of terrorism elsewhere in the world poses a direct threat to our internal security.

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11. "It would not be completely wrong to state that in India, art is religion and religion is art." In light of the statement, discuss the impact of various religions on art in India, citing relevant examples. **(250 words) 15**

"यह कहना पूर्णतः गलत नहीं होगा कि भारत में कला ही धर्म है और धर्म ही कला है।" इस कथन के आलोक में, प्रासंगिक उदाहरण देते हुए भारत में कला पर विभिन्न धर्मों के प्रभाव पर चर्चा कीजिए।

Answer: In India, art is religion and religion is art goes right since ancient times.

1. The Ajivika sect and Buddhism / Jainism called for relieving the sufferings of the masses. They did not favour idol worship and therefore the the Buddhist stupa artwork reflected the same. Even the Anda represents energy concentration in a stupa.

2. The ideals of Jainism – Right faith, right knowledge, right conduct is effectively reflected in the Jain temples.

3. The Hindu ideology says that energy is concentrated in the God and thereby God is placed in the Garbagriha. The panchyatan style of temples represent belief in avatars of Gods.

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4. Even in the South Indian temples, the Gopurams (gateway) are kept taller so that people can see it from the distance and forget all the evil thoughts and work for upliftment of the poor.

The water pool at the entrance calls for cleansing one self from all the vices.

5. Even in the medieval architecture, the ideas of Charbagh, Charminar, Taj Mahal, water body, all are inspired from teachings of Sufism. The use of domes ~~to~~ represents the mental connect with God.

~~Therefore~~,

6. Even the paintings that were made represent the ideology of the religion. For example Jahangir started the potrait style of paintings.

7. The ~~walls~~ images of Buddha in Gandhara and Mathura school of art depicts the emergence of Mahayana form of Buddhism.

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Therefore, the religion has a considerable impact upon the artwork in India.

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12. Despite organizational apathy from the Indian National Congress in its initial years, the working class in various parts of the country subsequently participated overwhelmingly in the nationalist movement. Discuss.

(250 words) 15

भारतीय राष्ट्रीय कांग्रेस के प्रारंभिक वर्षों में संगठनात्मक रूप से इससे दूर रहने के बावजूद, देश के विभिन्न हिस्सों में मजदूर वर्ग ने बाद में राष्ट्रवादी आंदोलन में प्रभावशाली रूप में भाग लिया। चर्चा कीजिए।

Answer: The Indian Congress, since it's inception in 1885 was seen as a elite member body. The people found it difficult to join congress due to it's high fees.

The working class was apathetic from congress ~~beca~~ because -

1. The party was ultimately being funded by capitalists. The obvious structural conflict between capitalism and socialism (proletariat) surfaced here.

2. There were trust issues between the workers and congress that got heightend after communist revolution.

3. The workers saw congress as an elite member body and an alien party.

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(इस भाग में कुछ ना लिखें)

Dispite the existing fissures, the workers participated overwhelmingly in the nationalist movement because -

1. The Congress later started working for socialist causes also. The Indian National Social Conference was set up in 1934.

2. It was under leadership of Gandhi that various regional issues also were taken up now. The fees was drastically reduced and Pradesh congress committees were made. This made it more inclusive.

3. It was the thread of nationalism and the spirited leadership which binded everyone against the British exploitation.

4. The revolutionary leaders from Congress also supported the communist parties that worked for workers miseries.

5. Gandhi in the Gandhi-Irwin pact talked about reducing the taxes on peasants.

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Therefore, it was the joint effort from both the Congress and the proletariat class that bind them together in the national movement.

Netaji Subhash Chandra Bose's Indian National Army contained soldiers from every class thereby increasing nationalism.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

13. Though some of his early measures restored faith among the Indians in the liberal tradition of England, Lord Ripon's tenure did not bring about significant changes in the conservative mindset of the colonial bureaucracy. Comment. **(250 words) 15**

यद्यपि लॉर्ड रिपन द्वारा किए गए कुछ शुरुआती उपायों ने इंग्लैंड की उदार परंपरा में भारतीयों के विश्वास को पुनर्बहाल किया, तथापि उसके कार्यकाल में औपनिवेशिक नौकरशाही की रूढ़िवादी मानसिकता में महत्वपूर्ण बदलाव नहीं हुए। टिप्पणी कीजिए।

Answer: Lord Ripon is known as the father of Indian local self government. He introduced measures to make a representative govt. at the lower levels (panchayat and municipality).

1. Adequate funds were to be transferred for their functioning.
2. Representation of people increased.
3. The power was to be devolved to lower levels of govt. instead of merely delegating it.

However, even after significant reform measures, it did not bring change in the mindset of conservative bureaucracy -

1. They were required to work under the politicians. However it was rarely practiced on ground.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

2. They continued to remain mai-baap in the eyes of poor people. They were always seen as administration responsible for sucking the blood of poor people by taking away their income.

3. Bureaucrats did not represented the people, but the government working at the top most level. Neither it was open for Indians. Therefore, they overshadowed the elected representatives and worked as per their wish.

4. They created fear psychosis in the eyes of poor people so much so that even their car was saluted. Their conservative ~~said~~ mindset continued to look upon Indians as 'white man's burden'.

Therefore, even after evolving a representative govt. at local level, the administration clogged the way for effective representation of people's choices.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

14. The New Social Movements in post-independence period made an important beginning in awakening the society against injustices and deepened the very notion of democracy in India. Discuss. **(250 words) 15**

स्वातंत्र्योत्तर अवधि में नए सामाजिक आंदोलनों ने अन्याय के विरुद्ध समाज को जागरूक बनाने में एक महत्वपूर्ण शुरुआत की और भारत में लोकतंत्र की धारणा को सुदृढ़ किया। चर्चा कीजिए।

Answer: The new social movements in India deepened the notion of democracy in India. As ~~Nehru~~ BR Ambedkar rightly said – that at the base of political democracy lies the social, cultural and economic democracy.

The injustices facing India post independance includes –

1. Increasing caste rigidities
2. Communal disharmony
3. Rising Gini coefficient and increasing inequalities.
4. Increasing regionalism etc.

Due to continued efforts of leaders like Sardar Patel, Pattabhi Sitaramaiya, Dr APJ Abdul Kalam, Indira Gandhi etc, there began a new social awakening in the society.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. The credit of united India goes to VP Menon and Sardar Vallabhbhai Patel. They expressed what people wanted – i.e democracy and representation of themselves instead of a monarchial form of government.

2. The southern states saw imposition of a common language as an attack to their cultural identity. It led to more exclusion than inclusion and therefore Indira Gandhi continued English to be used in administration.

3. Dr APJ Abdul Kalam, despite being the 'first man' of India, never hesitated to sit down with poor people on roadside. He worked all his life to reduce the inequalities and fight poverty.

4. The mass movements against child marriage, widow remarriage, infanticide by our youth has caused enhanced social mobility in the society. This has reduced the patriarchial mindset and helped in empowering the women.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

15. What are the reasons for recurrent and often catastrophic wildfires in places like Australia and the United States? Are there any lessons to be learnt from these events by India? Explain adequately. **(250 words) 15**

ऑस्ट्रेलिया और संयुक्त राज्य अमेरिका जैसे देशों में बार-बार और प्रायः विनाशकारी वनाग्नि के क्या कारण हैं? क्या भारत को इन घटनाओं से कोई सीख लेनी चाहिए? विस्तारपूर्वक व्याख्या कीजिए।

Answer: The year 2019 was named as 'black rain' year by Australian government due to increased wild fire in the Bushes. Similarly, the Californian forests were on fire in 2020.

Reasons for catastrophic wildfires -

1. Climate change events: The weakening of polar storm over Antartica caused sudden stratospheric warming. This pushed the westerlies towards the equator thereby lack of rain bearing winds in Australia leading to droughts.

2. Increased El-Nino events: Their frequency has increased due to global warming.

3. Other reasons include over grazing by cattles, and some anthoropogenic causes -

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Anthropogenic causes

- Rapid deforestation and converting grasslands to agricultural lands
- Increasing exposure to exotic species that eats up the grasses
- Enhanced susceptibility due to man made blunders
  - Eg - keeping a lighted cigarette during camping events
- Overgrazing by animals

Yes, definately there are many lessons that India could learn by comparative analysis.

1. We need to evolve a comprehensive roadmap that will involve all stakeholders along with people inhabiting forests to make a policy dealing with wild fires.

2. Installation of early warning systems and regenerating grasslands.

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(इस भाग में कुछ ना लिखें)

3. strict regulation of introduction of alien species in forested area.
The simlipal Biosphere reserve fire also serve as a lesson which calls for effective management of increasing wildfires even in India.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

16. Discuss why India needs a cross border flood management mechanism. Also, state the major issues in cross border flood management and suggest remedial measures in this context. **(250 words) 15**

चर्चा कीजिए कि भारत को सीमा-पार बाढ़ प्रबंधन तंत्र की आवश्यकता क्यों है। साथ ही, सीमा-पार बाढ़ प्रबंधन से जुड़े प्रमुख मुद्दों को वर्णित करते हुए इस संदर्भ में उपचारात्मक उपायों का सुझाव दीजिए।

Answer: Assam and Bihar faced their worst floods in 2020 amid already burning pandemic crisis. Rivers Ganga (kosi) and Brahmaputra both being cross border rivers therefore requires cross border flood management mechanism.

1. Even the ~~Ganga~~ Tista river that originates from sikkim flows via Bengal (upper riparian State) to Bangladesh (lower riparian state)

2. The Indus river system acts as lifeline for both the people of Pakistan and of India.

3. Brahmaputra originates from china and serves as lifeline for our North East.

Therefore, cross border flood management is required in an integrated manner.

Major problems faced -

1. Paro diplomacy: Till date, there cannot be any Tista water sharing agreement due

Don't write anything this margin (इस भाग में कुछ ना लिखें)

to increase in para diplomacy (wherein the individual state - Bengal - deals with the issue with Bangladesh).

2. Construction of large dams by upper riparian states. For example, china is building dams on Brahmaputra river and the process remains opaque. Due to lack of co-operation among countries, the issue exacerbates the flood management problems.

3. Pakistan continuously blames India for violating the Indus water Treaty. Even though it is Pakistan which remains absent in the meetings.

Remedial measures in this context -

1. Installation of early warning systems and enhanced communication between the countries.

2. sharing the details of dams being constructed by upper riparian states.

3. Fasting up the process for signing up Tista river agreement and Ganga water sharing agreement.

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4. All the concerned stakeholders must be involved together and a minimum level of flow should be maintained in the rivers.

The cross-border flood management will only be successful if nation states work in a well co-ordinated, integrated and co-operative manner. Use of technology (AI, IOT) needs to be promoted.

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17. Depletion of water resources in India is both a geo-climatic phenomenon as well as a result some short-sighted government policies. Discuss. **(250 words) 15**

भारत में जल संसाधनों का ह्रास एक भू-जलवायु (जियो-क्लाइमेटिक) घटना के साथ-साथ कुछ अदूरदर्शी सरकारी नीतियों का परिणाम है। चर्चा कीजिए।

Answer: The recent report published by CEEW (Centre for energy, environment and water) throws light on acute water crisis facing India. NITI has already said that 20 cities in India have completed depleted their ground water sources by 2020.

Depletion of water resources as a geo-climatic phenomenon -

1. Monsoonal vagaries: The enhanced period of droughts in the continent due to events like El-Nino has depleted water availability.

2. Geomorphological reasons : The presence of mica layer in Jaisalmer (Rajasthan) has made soil impermeable to water absorption. This increases the runoff from the soil layer and depletion of water stock in the ground.

3. Climate change and global warming events has ~~so~~ eroded soil capacity depleting ground water storage.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Depletion of water resources due to short sighted govt. policies -

1. Increased focus on irrigation - Though done with good intent, farmers often over-utilise the ground water using bore-wells and canals.

2. Minimum support price is offered to rice and wheat - This has increased the tendency of farmers to focus only upon rice and wheat which are water intensive crops.

This has further increased the mono-cropping activities which reduces the yield expected from soil.

Monocropping → Decreased nutrients in soil → Affects it's water holding capacity → Increased runoff → Depletion of water resources

3. Enhanced focus on hydroelectricity generation - In a bid to move towards renewable energy sources, we end up building huge dams on rivers which bifurcate the flows. Even the minimum water flow is not maintained that makes rivers dry.

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Therefore, in my opinion a combined, co-ordinated and well developed model of 'water governance' needs to be created. This will act as a platform for all the affected parties and will help India emerge out of the water crisis (attaining SDG 1, 2, 3).

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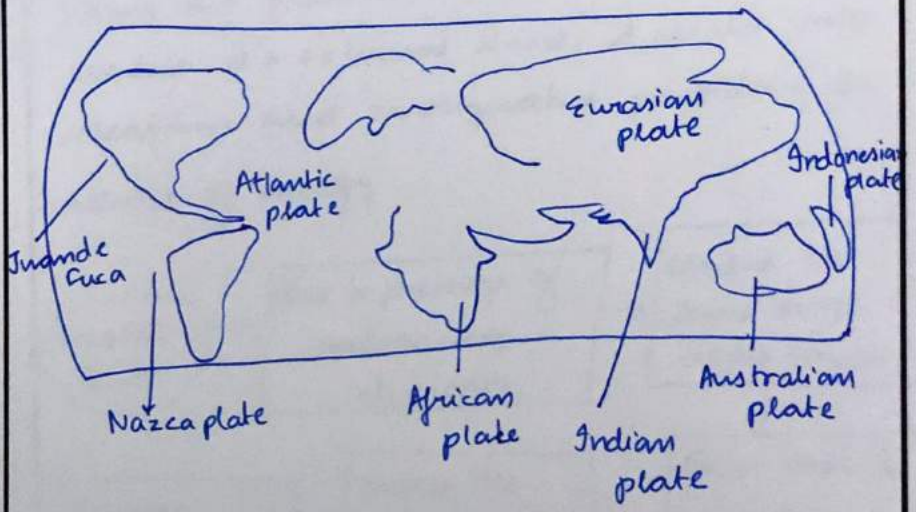
18. What are the major lithospheric plates? How and why do these plates move? **(250 words) 15**

प्रमुख स्थलमंडलीय प्लेटें कौन-सी हैं? ये प्लेटें कैसे और क्यों गति करती हैं?

Answer: The geologist ~~Af~~ Alfred wegener gave the idea of existence of lithospheric plates. The Earth is divided into 9 major and many minor lithospheric plates.

Some of the major plates includes –

1. Nazca plate
2. Indo-Australian plate
3. Eurasian plate
4. Pacific plate
5. North American plate
6. Juan de Fuca



Since the asthenosphere (upper magma) comprises of liquid (semi solid molten) material. It is responsible for rise of convectional currents.

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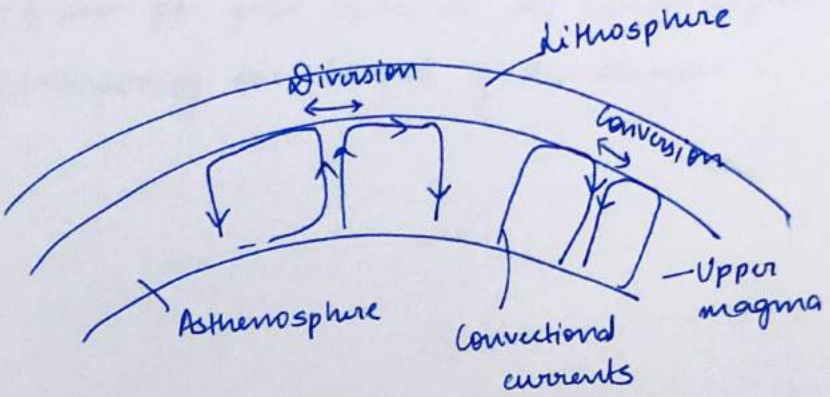
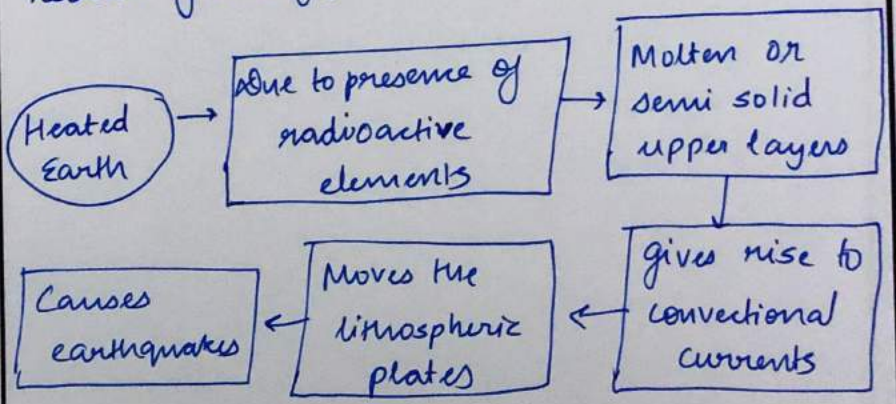
These convectional currents are responsible for movement of lithospheric plates which lies above asthenosphere.



When the pressure in the asthenosphere reaches it's external limit, it results into volcanism and earthquakes providing for release of energy.



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It is substantiated by the fact that height of Himalayas is increasing continuously. The Indian plate is moving 1 mm per year towards the Eurasian plate increasing the height of Himalayas.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

19. There exists a wide gap between the constitutionally professed secularism and its practice in India. Do you agree? Substantiate with relevant arguments. **(250 words) 15**

संवैधानिक रूप से घोषित पंथनिरपेक्षता और भारत में इसे व्यवहार में लाने के बीच एक व्यापक अंतर मौजूद है। क्या आप इससे सहमत हैं? प्रासंगिक तर्कों के साथ पुष्टि कीजिए।

Answer: The preamble of India reads "to constitue India into a sovereign, socialist, secular, democratic republic". It professes that India is a secular state that does not entirely separates itsely from religion, but also does not favour one over the other.

1. The Apex court by using Article 143 of constitution ensured complete justice by granting the land to build a mosque in Ayodhya - Babri Masjid case.

2. The state mobilised civil societies and NGO's in the wake of attack on minorities in Kashmir valley. They are continuously engaging the citizens and ensuring peace and harmony. Therefore, state has not distanced itsely from religion but is proactively engaging in becoming a united India.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. The intent behind Citizenship Amendment Act was to prevent the illegal migrants, who otherwise are responsible for creating law and order ~~citiz~~ situations.

4. Our constitution has given rights to linguistic and religious minorities to establish and administer their own institutions. The state has not interferred in their functioning.

5. If government is enthusiastically ~~british~~ supporting Ayodhya Mandir, then at same time it is building airports (at Jaipur) for easy travel to Haj travellers.

Therefore, secularism do exists in both letter and spirit in India and there is no gap between what is prescribed by constitution and what happens in real.

However, I am also of the opinion that Indian government along with state govts and civil society needs to create more social mobility.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Social mobility → Equality in society → No discrimination → Upliftment of man standing last at societal order → Make peace committees during communal violence

↓

This will make us more 'inclusive'.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

20. India spends less than one per cent of GDP on care work infrastructure and services. In view of the statement, explain how increased public investment in care economy infrastructure can be instrumental in meeting multiple policy objectives. **(250 words) 15**

भारत द्वारा देखभाल से संबंधित अवसंरचना और सेवाओं पर जी.डी.पी. के एक प्रतिशत से भी कम व्यय किया जाता है। इस कथन के आलोक में, स्पष्ट कीजिए कि देखभाल अर्थव्यवस्था अवसंरचना (केयर इकोनॉमी इंफ्रास्ट्रक्चर) पर सार्वजनिक निवेश में वृद्धि कई नीतिगत उद्देश्यों को पूरा करने में कैसे सहायक हो सकती है।

Answer: Care economy comprises in itself the silver economy (for elderly) and also includes the children and destitutes. India spends less than 1% on this care economy which is disproportionately skewed towards women workers.

The increased public investment in care economy will lead to meeting of multiple objectives as -

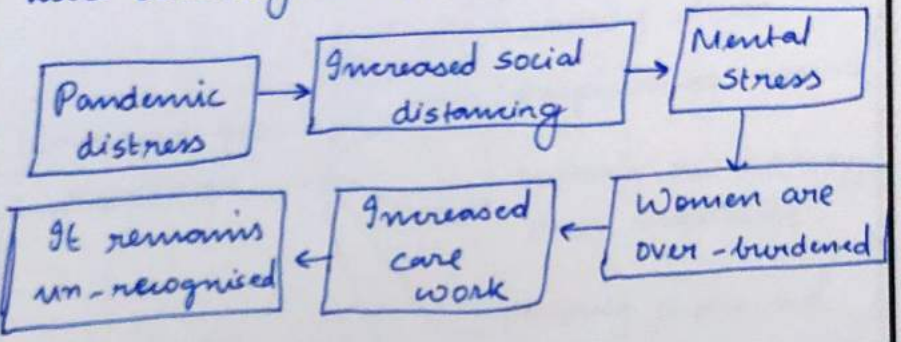
1. It promotes mental health of patients - when any patient (elderly) finds a companion to talk to and share their problems, it results into ~~increased~~ improved health both mentally and physically.

2. The workforce for care economy comprises of 90% women workers. They remain informal participants.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Formalising the care work will resulting in increased earnings for women and leading to lesser dependence on man. This will empower the women.

3. Amid the pandemic, the demand for care economy is on an increase.



4. The ASHA workers are not paid on a regular basis even when they are the main face behind removing vaccine hesitancy among people (in rural areas).

5. Care work is considered a pink collar job and therefore it's benefits remain ~~un~~ covered and hidden from society.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Increased govt. expenditure

- Recognition of care work
- Formalisation of care economy
- Relieved mental and health stress
- Empowering women
- Making our economy more inclusive
- Helping orphaned children which will be bright future of India
- Meeting sustainable Development goals and adequate policy outcomes.

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GENERAL STUDIES (TEST CODE : 1515)

Name of Candidate	Khushhali Solanki		
Medium Eng./Hindi	English	Registration Number	1214161
Center		Date	

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
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15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न–सह–उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

16-B, 2nd Floor, Above National Trust Building, Bada Bazar Marg, Old Rajinder Nagar, Delhi-110060

Plot No. 857, 1st Floor, Banda Bahadur Marg (Opp Punjab & Sindh Bank), Dr. Mukherjee Nagar Delhi- 110009

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. Explain the meaning of off-budget borrowings and its role in helping the government raise funds for various expenditures. Also, comment on its desirability. **(150 words) 10**

बजटेतर उधारी (ऑफ-बजट बॉरोइंग्स) का अर्थ स्पष्ट कीजिए और विभिन्न व्ययों के लिए धन जुटाने में सरकार की सहायता करने में इसकी भूमिका का उल्लेख कीजिए। साथ ही, इसकी वांछनीयता पर टिप्पणी कीजिए।

Answer: In the budget 2021-22, the government laid special emphasis on reducing the dependence on off-budget borrowings.

Off-budget borrowings refers to the funds raised by government company or organisation that is outside the scope of budgetary borrowings.

The role of off-budget borrowing in helping government-

1. It is used to meet the contingent needs posed by the situation.

2. It is not counted in fiscal deficit but is a part of government debt. Therefore, it eases government to satisfy the target laid by FRBM (Fiscal Responsibility & Budget Management) Act.

3. Food Corporation of India and NAFED have been taking funds via this method in procurement of food grains.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. Even in PMAY (PM Awas Yojana), funds were taken from private corporations and issuing bonds to construct houses in a speedier manner.

Desirability of off-budget borrowing

- It is hidden from public scrutiny as it is not counted in fiscal deficit.
- It helps when government is facing financial crunch.
- It may pose threat to transparency in handling funds
- Lacks accountability, answerability

Therefore, off budget borrowing is not considered desirable and government envisages to reduce dependence on it.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

2. It is argued that genetically modified food crops are required to ensure food security of India. Examine in view of concerns regarding introduction of GM crops. **(150 words) 10**

यह तर्क दिया जाता है कि भारत की खाद्य सुरक्षा सुनिश्चित करने के लिए आनुवंशिक रूप से संशोधित खाद्य फसलों की आवश्यकता है। जी.एम. फसलों की शुरूआत से संबंधित चिंताओं के आलोक में परीक्षण कीजिए।

Answer: Till date, India has only granted permission to Bt- cotton to be grown in agricultural farms.

However, there is a repeated demand of allowing Bt- Brinjal and other varieties of food crops for attaining self sufficiency in food grains.

GM crops →
- Increased yield of crops
- Better output
- Increased shelf life
- Protection from insecticides and herbicides

↓ Results into increasing food security.

However there are concerns regarding same-

- Introduction of alien species create loss of biodiversity.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

- The insects become resistant to genetic modification of crops.
  That's why now HtBt cotton is proposed to make it herbicide tolerant.
- Increased food safety concerns and ethical issues in genetic modification.
- Decreases food trade under sanitary and phyto sanitary measures
- Harmful for health

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. India's price intervention policies to support its agricultural sector not only create a broken system but also complicate matters related to international trade rules. Critically discuss. **(150 words) 10**
अपने कृषि क्षेत्र का समर्थन करने के लिए भारत की मूल्य हस्तक्षेप नीतियां न केवल एक अप्रभावी व्यवस्था का निर्माण करती हैं बल्कि अंतर्राष्ट्रीय व्यापार नियमों से संबंधित मामलों को भी जटिल बनाती हैं। समालोचनात्मक विवेचना कीजिए।

Answer: Recently, India invoked the peace clause in WTO due to breaching it's limit of providing agricultural subsidies.

De minimis subsidy
- → 10% of agri output for developing world.
- → 5% of agri output for developed countries.

India's price intervention policies –

1. It has increased growing of only wheat and rice which encourages mono cropping - This decreases soil fertility.

2. Downgrades international relations - Eg: Sugar issue with Brazil.

3.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

However on the other hand it must be noted that -

1. Even Japan and USA have breached the limit of de minimis entitlements many times.

2. Developed countries are providing subsidies 5% of agri output. This is far more than 10% of our output.

India supports 'per farmer rule' to enhance subsidy in order to protect domestic markets from dumping.

Effective revamping of WTO dispute resolution board shall be done and peace clause shall be finalised.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. India has an opportunity to become a leading global food supplier provided it has an efficient supply chain and the right marketing strategies. Elucidate. (150 words) 10

भारत के पास एक अग्रणी वैश्विक खाद्य आपूर्तिकर्ता बनने का अवसर है बशर्ते उसके पास एक कुशल आपूर्ति श्रृंखला और सही विपणन रणनीति हो। विशदीकरण कीजिए।

Answer: India occupies a meagre 2.4% percent share in agricultural exports despite being one of the largest producers of food grains and horticultural products.

We therefore need to find out the root cause of problem that lies in supply chain management and marketing strategies.

1. Creation of brand names : Still various export oriented products lacks GI tag which otherwise serves as source of recognition.

2. Sanitary and phytosanitary measures –

Recently, EU has blamed India for increased levels of anthocyanin in tea. This has hampered it's exports.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. Excessive use of pesticides and insectides ~~for~~ at the downside of supply chain serves as roadblock to success.

4. Increased marketing reach of co-operatives and branding their products which otherwise remain un-noticed.

5. Logistics posed supply issues

The Scheme for formalisation of micro food enterprises serve as correct step in bringing the unorganised sector into organised one. This will increase transparency.

Along with this, promotion of brands (like Manipuri Black Rice, Kasturi Cotton) needs to be undertaken for effective price utilisation.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

5. Land banks are increasingly gaining prominence in India to encourage land-use efficiency and enable economic growth. In this context, discuss the benefits of a land bank and state the concerns associated with it. **(150 words) 10**

भूमि उपयोग दक्षता को प्रोत्साहित करने और आर्थिक वृद्धि को सक्षम बनाने के लिए भूमि बैंक भारत में तेजी से प्रमुखता प्राप्त कर रही हैं। इस संदर्भ में, भूमि बैंक के लाभों तथा इससे संबंधित चिंताओं का उल्लेख कीजिए।

Answer: Land Banks have been in use in India since 1990's.

Land banks
- Checks unplanned growth.
- Ensures land use efficiency
- Land degradation neutrality
- Enables economic growth by rejuvenating land
- Financing the afforestation drives.

PM in COP14 had called for attaining Land Use neutrality by reversing and halting deforestation.

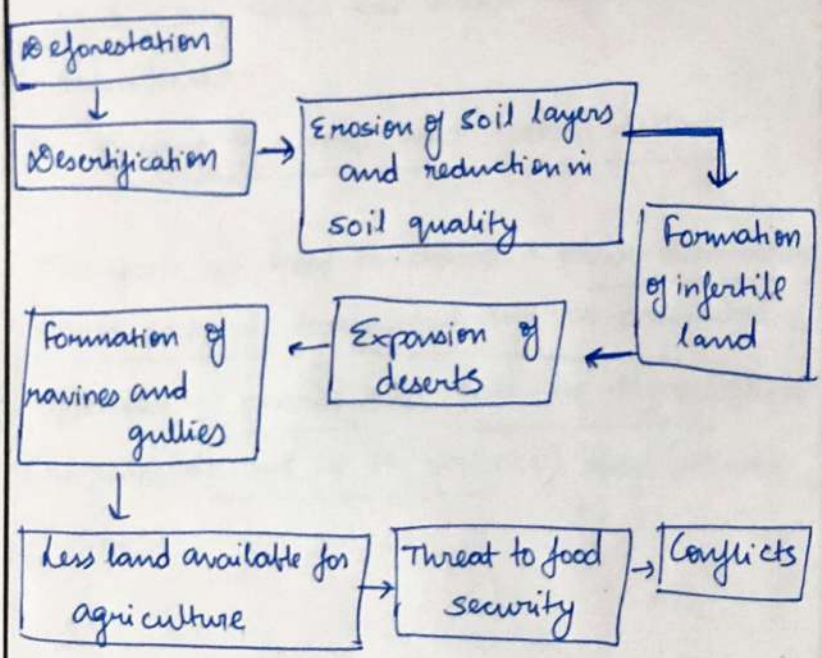
This results into simultaneous economic growth by using GIS/GPS technology in delinicting the use of lands.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

6. Desertification has been described as one of the greatest environmental challenges of our time and climate change is making it worse. Discuss. (150 words) 10

मरुस्थलीकरण को वर्तमान समय की सबसे बड़ी पर्यावरणीय चुनौतियों में से एक के रूप में वर्णित किया गया है तथा जलवायु परिवर्तन इसे और बदतर बना रहा है। चर्चा कीजिए।

Answer: Recently, PM announced the Land Degradation Neutrality (LDN) agenda as part of COP14 summit of ~~UNCBD~~ UNCCD (UN convention to combat desertification).



Desertifation is therefore described as greatest environmental challenges. However, climate change is making it coorse -

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. Monsoonal vagaries - Large down pours washes away the nutrients in top soil making it infertile.

2. Enhanced and prolonged drought conditions This enlarges the area under desertification.

3. Rise in temperature - Causes loss to biodiversity which has direct impact on desertification.

4. Drying of rivers and loss of wetlands.

Therefore we need to adopt a multi disiplinarian, cross sectoral, integrated and co-ordinated approach to reverse and halt the degradation (as said in COP 26 to UNFCCC) and achieve LDN.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

7. In the context of intellectual property rights, discuss the advantages and disadvantages of releasing projects under an 'Open Source' license. **(150 words) 10**

बौद्धिक संपदा अधिकारों के संदर्भ में, 'ओपन सोर्स' लाइसेंस के तहत परियोजनाओं को जारी करने के लाभ और हानियों पर चर्चा कीजिए।

Answer: Recently, India and South Africa moved to WTO (World Trade Organisation) for making vaccines of COVID under open source license.

The advantages of open source license are -

1. It ensures proper utilisation of brainwork of others for the benefit of society.

2. It is used to meet the the emergency needs like that posed by pandemic.

3. It helps in consolidating information whereby similar products can be manufactured in people's interest.

4. It prevents evergreening of patents.

The disadvantages of open source license are -

1. The UN charter calls for protection of intellectual property rights as a human right.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

2. It deprives the originator of IPR from the remuneration that they are entitled to.
   Eg - Royalty fees.

3. This creates reduced importance for brainwork of others by making it 'generic'.

Use of open source license shall therefore be restricted upon contingent situations. It shall be available for those products which are in public interest - Eg treatment of cancer.
The brainwork of human shall be otherwise protected under UN charter.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

8. "Indian space sector has been dominated by a single umbrella of government and government institutions." In light of the statement, discuss the significance of Indian Space Association in providing an impetus to space technology in India. **(150 words) 10**

"भारतीय अंतरिक्ष क्षेत्रक पर सरकार की एकमात्र संस्था का प्रभुत्व रहा है।" इस कथन के आलोक में, भारत में अंतरिक्ष प्रौद्योगिकी को प्रोत्साहन प्रदान करने में भारतीय अंतरिक्ष संघ के महत्व की विवेचना कीजिए।

Answer: Recently, Government created In-Space (Indian National Space Promotion and Authorisation centre) as the regulator and NSIL as the commercial arm of ISRO. This has opened gates for private sector entry into space sector.

However, in past Indian space sector was dominated only by ISRO.

The Indian Space Association thus formed will provide an impetus to opening opportunities for utilising skills of private sector.

→ This includes the new space remote sensing policy where the information regarding space assets will now be democratised.

→ ISA will help in promoting private sector in space building assets Eg- Satellites.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

→ New and dynamic space technology will be built. Eg - Using AI/ML for space debris tracking and detection. This will prevent our space assets from debris.

→ Creation of low cost advanced satellites - Eg Digantra is making nano satellites for 24×7 space based monitoring and research.

→ Making important products in supply chains of PSLV, GSLV rockets.

Therefore Indian space association will democratise and decentralise the space sector which was otherwise solely occupied by govt -

Don't write anything this margin (इस भाग में कुछ ना लिखें)

9. Man and machine both have an important role in national security and making urban areas secure. In this context, discuss how technology is a major stakeholder in addressing the internal security challenges of India. **(150 words) 10**

राष्ट्रीय सुरक्षा और शहरी क्षेत्रों को सुरक्षित बनाने में मानव और मशीन दोनों की महत्वपूर्ण भूमिका है। इस संदर्भ में, चर्चा कीजिए कि प्रौद्योगिकी किस प्रकार भारत की आंतरिक सुरक्षा चुनौतियों से निपटने में एक प्रमुख हितधारक है।

Answer: DRDO has been making robots DAKSH for detecting bombs that play an important role in internal security of India.

Man operates the machine which is powered by technology and thus both assumes central role in maintaining internal security.

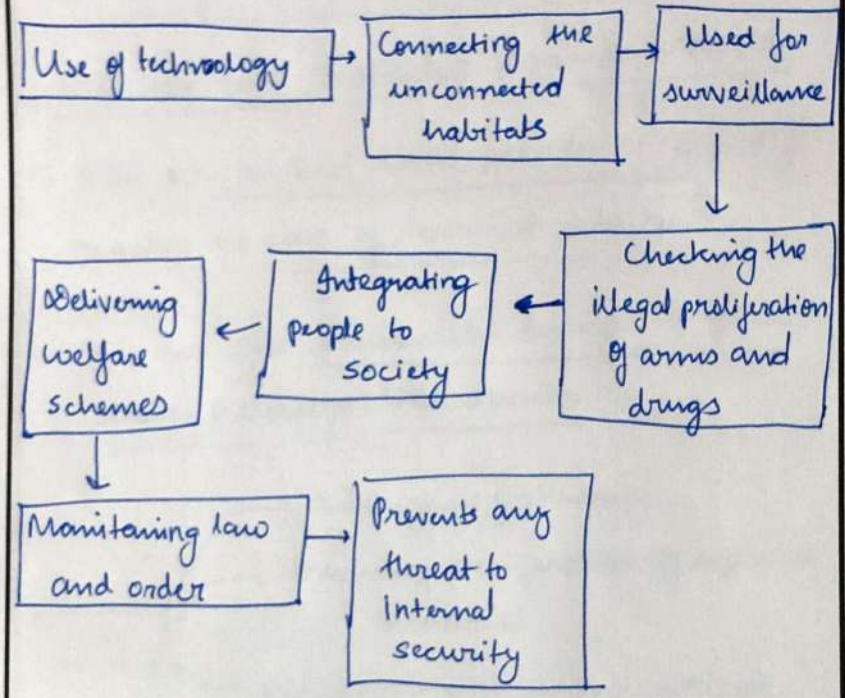
1. Making urban areas secure : Use of data from Earth observing satellites.

2. Use of drones : This helps to keep a watch on far flung area where it is otherwise harder to reach. Eg - Indo Bangladesh border during floods.

3. Perception management – Role of IT and social media in filling the trust deficit among extremist organisations.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. Enhancing connectivity via internet - Use of white-fi to provide internet services. This ensures developmental aspect and enhances communication and co-ordination.



However, adept measures are required to prevent use of technology in inciting more extremism.

8. The challenges posed by cyber warfare needs to be addressed.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

10. National Security Guard (NSG) has emerged as a formidable force equipped to handle various manifestations of terrorism. Discuss the mandate and achievements of this force. **(150 words) 10**

राष्ट्रीय सुरक्षा गार्ड (NSG) एक पराक्रमी बल के रूप में उभरा है जो आतंकवाद के विभिन्न रूपों से निपटने के लिए सुसज्जित है। इस बल के अधिदेश और उपलब्धियों की विवेचना कीजिए।

Answer: National Security Guards (NSG) under administrative control of PMO was formulated in 2008 following the Mumbai attacks.

→ NSG acts as a watchdog against terrorism.

→ NSG acts as first hand provider of security to nation in case of terrorist attacks.

→ It's role was commendable during Surgical strike following URI attacks.

NSG
- → Intelligence gathering
- → Preventing proliferation of explosive material
- → Reducing incidents of terrorism
- → Identifying sleeper cells which act as hotbeds for terrorism
- → Launching defensive operations on terrorist outlooks.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

NSG had prevented major outbreaks of terrorism. Simultaneously it has played a formidable role in -

1. Surgical strikes
2. Handling over ground workers in Jammu and kashmir.
3. Information and Intelligence gathering via IMAC.
4. Reduce proliferation of JeM (Jaish e Mohamad) and Lashkar e Toiba.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

11. What do you understand by asset monetisation? Why is it needed in India? In this context, discuss the issues that need to be addressed for the National Monetisation Pipeline to succeed. **(250 words) 15**

परिसंपत्ति मुद्रीकरण से आप क्या समझते हैं? भारत में इसकी आवश्यकता क्यों है? इस संदर्भ में, उन मुद्दों पर चर्चा कीजिए जिन्हें राष्ट्रीय मुद्रीकरण पाइपलाइन के सफल होने के लिए समाधान करने की आवश्यकता है।

Answer: Recently, government launched National Monetisation pipeline that will move simultaneously with National Infrastructural pipeline. Government will ensure 6lakh crore money via this method.

Asset monetisation → Monetising the brownfield assets

↓

Roads, railways, gas lines, bridges, stadium → They don't generate revenue for government by lying idly.

↓

Therefore, leased to private sector for certain amount of time. → Ownership remains with government

↓

Generation of revenue

↓

Utilisation of assets

Don't write anything this margin (इस भाग में कुछ ना लिखें)

It is needed in India because huge amount of government assets like stadiums are hardly used in one a year. But the government has to regularly pay on it's maintenance and security purposes. This strains our coffers.

There are various issues that need to be resolved for making NMP a success.

1. Creation of monopolies : Asset shall not be handed over to just few private players. All players shall be given fair play.

2. Monetising only brownfield assets : Government has set it's plans to monetise the GAIL gas pipeline. However it is already generating revenue for government.

3. Moving for revenue sharing model instead of profit sharing model. In case of profit sharing models, the private players adopt various tactics to show lesser profits resulting in loss for government.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

4. Adept utilisation of funds in National infrastructural pipeline projects – The money thus raised shall be used for it's intended use only.

5. The lease of government assets shall be taken back after completion of time.

6. The private sector land lying idly shall also be monetised.

7. It shall be transparent, accountable process since government's assets are made by people's money.

Therefore, above mentioned issues needed to be taken care of and judicious monetisation of assets must take place.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

12. What is social stock exchange (SSE)? Discuss the need for setting up of SSEs and key challenges in their effective implementation. **(250 words) 15**

सोशल स्टॉक एक्सचेंज (SSE) क्या है? SSEs की स्थापना की आवश्यकता और उनके प्रभावी कार्यान्वयन में विद्यमान प्रमुख चुनौतियों पर चर्चा कीजिए।

Answer: Recently SEBI (Security and Exchange board of India) has drafted guidelines for setting up social stock exchange apart from BSE and NSE.

Social stock exchange
- → The philanthropic organisations can purchase bonds of NGO working for social cause.
- → The investors don't expect return on purchase of bonds
- → It helps to meet our social objectives and upliftment of society.

The need for setting up SSE is –

1. Lack of funds with NGO's – This prevents them for achieving the targets that they aim for.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

2. Propagation of socialistic agenda of a welfare state. It enhances the networked form of governance where development takes place via bottom top approach.

3. Injecting transparency in working of NGO's. Since it is clear that who has invested and how the money is utilised. This ensures accountability.

4. SSE's are different from normal stock exchanges as they don't guarantee returns to the investors.

However, there are key challenges in their effective implementation as -

1. Lack of guidelines on their operation.

2. It shall be made clear as to where the money is being invested by NGO's.

3. The outcomes remain uncertain in regards with attaining development.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. There is no methodology to measure whether expected outcomes have been achieved or not, as it will be a long term phenomenon.

Therefore, above mentioned challenges needs to be addressed while delineating well laid out strategy for SSE. The regulation needs to be proper without any overlap between various organs.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

13. In the context of India, highlight the importance of agriculture extension. What are the challenges faced in provisioning of agriculture extension services? How does the National Mission on Agricultural Extension & Technology (NMAET) address these issues? (250 words) 15

भारत के संदर्भ में, कृषि विस्तार के महत्व पर प्रकाश डालिए। कृषि विस्तार सेवाओं के प्रावधान में सामना की जाने वाली चुनौतियां कौन-सी हैं? कृषि विस्तार और प्रौद्योगिकी पर राष्ट्रीय मिशन (NMAET) इन मुद्दों का कैसे समाधान करता है?

Answer: Agriculture extension services includes the technical assistance to be provided by extension workers to the farmers. Eg- via Krishi Suvidha Kendras.

Importance of agriculture extension -

1. Educating and empowering the farmers.
2. Hands on approach to use of technology.
3. Water use efficiency will be increased if farmers are educated about importance of sprinkers and drip irrigation.
4. Increased yields with help of soil health cards.
5. Integrating science with agriculture. Eg- Krishi Vigyan Kendras.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Challenges faced

- Lack of workforce as extension workers.
- Reluctance of farmers on use of technology.
- Digital divide
- Reach of Internet to far flung villages is uncertain
- Lack of skilled workforce
- Continued absence of extension workers due to lack of accountability.

The National Mission on Agriculture Extension and Technology is a right step in empowering the farmers.

1. It will provide kiosks in villages to help farmers understand technological use.
2. Making farmers aware of various ~~technolo~~ schemes of government.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. Linking academia with agriculture.
4. Providing a determined cadre of extension workforce to educate and empower the farmers.
5. Promotion of self help groups.
6. capacity building and training the farmers.

Therefore, NMAET will help us to achieve Sustainable Development Goals by ensuring use of technology in increasing yields and simultaneously protecting crops from disasters by empowering farmers.

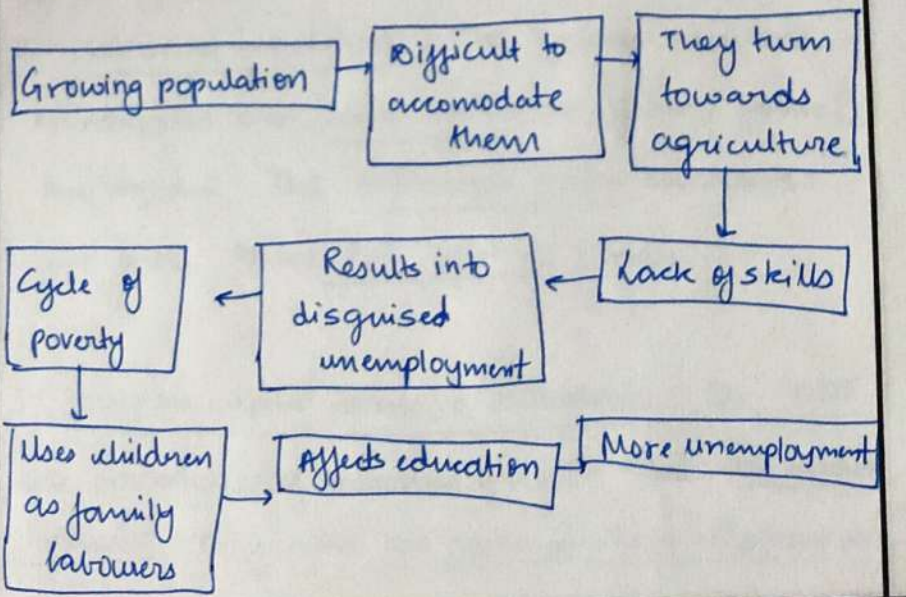
Don't write anything this margin (इस भाग में कुछ ना लिखें)

14. Clearly delineate the 'employment problem' that India currently faces. Also, explain the fundamental reasons behind existence of this problem. **(250 words) 15**

भारत वर्तमान समय में जिस 'रोजगार समस्या' का सामना कर रहा है, उसे स्पष्ट रूप से निरुपित कीजिए। साथ ही, इस समस्या के अस्तित्व के मूल कारणों की व्याख्या कीजिए।

Answer: India adds 35 lack more people to the eligible workforce everyyear. However, we have seen an unemployment rate of 3% in normal years. This has further exacerbated to 12% amid pandemic.

We are in phase 3 of demographic cycle and our population is continously growing. We will surpass China by 2027 as predicted by World Bank estimates.



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The fundamental reasons behind existence of unemployment is -

1. Early Deindustrialisation (as said by former CEA Arvind Subramaniyan) : We shifted to service economy without peaking our industrial output.

Early deindustrialisation → People lost jobs in manufacturing sector → One job in industry creates addition 3 more jobs → Whereas one job in service economy consumes other jobs.

2. Growing population : The youths remain uneducated and lack skills for getting formal employment. The informal sector accounts for more than 80% jobs in India.

3. Focus on capital intensive industries : Our MSME are powerhouse of economic growth that are labour intensive. They have not received deserved attention.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. Use of technology and Industrial Revolution 4.0 - Lack of upskilling and reskilling the employees who have lost jobs.

5. Brunt of pandemic - Many companies have shut down. The female workforce has drastically decreased as they have to take up the care work.

Therefore, in my opinion, we need to address the fundamental reasons behind unemployment. We can grab the opportunity for making low cost technology products to fill the gap left by China. This will make our focus more on labour intensive jobs rather than capital intensive.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

15. Although steps have been taken for integrating the dispersed logistics activities of maritime trade, much more needs to be done to make India a maritime powerhouse. Discuss. **(250 words) 15**

हालांकि समुद्री व्यापार की विखंडित लॉजिस्टिक गतिविधियों को एकीकृत करने के लिए विभिन्न कदम उठाए गए हैं, फिर भी भारत को एक समुद्री पावरहाउस बनाने के लिए और भी बहुत कुछ किए जाने की आवश्यकता है। चर्चा कीजिए।

Answer: Recently India launched LEADS (Logistics Index) which represents our efforts in integrating the dispersed logistics sector with special mention to maritime trade. It must be noted that 90% of our trade occurs via ports.

There are various steps taken in this regards-

1. Sagarmala Model : Creation of port led industrialisation model with integrated network of roads with ports.

2. Multi Model Logistics Parks (MMLP) - It has been made in Assam and West Bengal. This will ensure Ease of doing business.

MMLP → single contractor in all transport routes → Prevents delay → Enhances trade connectivity

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. The Economic Survey 2020 has highlighted that our ship turnaround time has reduced to 3 days from earlier 7 days.

4. Port Authority Development Act - This favours landlord model of ports. It will increase connectivity with regards to maritime trade with private sector participation.

5. Developing new ports - like Vadhavan and increasing the capacity of old ports by enhanced dredging activities.

However, Economic survey also noted that for a good to reach from Delhi to USA, it will take more than 40 days in India itself. This includes the loading and unloading at ports.

→ Much of the time, the ships stand without getting unloaded at ports.

→ The presence of Inter model connectivity mode - This has different contractors for each transport route. It creates co-ordination issues.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

→ Getting clearances on ports – Since it is the responsibility of importer to check origin of goods, it consumes ample amount of time.

→ Many ports have not yet adapted technological intervention of SWIFT (single window interface for facilitating trade). This causes delays in filing and tracking of goods.

Therefore, interventions are required to enhance our maritime trade by improving logistics sector. The NITI document on India achieving 75 years of independence calls for improving the connectivity and integrated management of logistics to make India maritime powerhouse.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

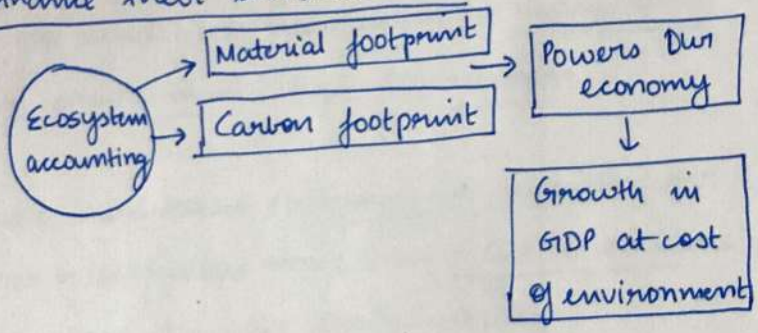
16. Accounting for natural capital and ecosystem services is crucial to understand the link between the economy and environment. Discuss with specific references to India's initiatives in this regard. **(250 words) 15**

अर्थव्यवस्था और पर्यावरण के मध्य संबंध को समझने के लिए प्राकृतिक पूंजी और पारिस्थितिकी तंत्र सेवाओं के लिए लेखांकन महत्वपूर्ण है। इस संबंध में भारत द्वारा की गयी पहलों के विशिष्ट संदर्भ के साथ चर्चा कीजिए।

Answer: Recently NCAVES (Natural Capital and Valuation of Ecosystem Services) was revamped for India, Brazil, Mexico, China and South Africa by EU and UNEP.

Understanding link between economy and environment –

1. NCAVES helps to understand the loss of ecosystem incurred by humans in order to enhance their economic needs.



2. It is pertinent to mention that our biological capacity is growing at 0.5% every year while our material footprint increases at 2.7% per year.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Limited biocapacity of environment → We are using services of nature mindlessly → will not result into sustainability → Therefore, accounting our ecosystem needs → Policies will then be framed in this regard → Economy and environment will move hand in hand.

3. NCAVES help to achieve and calculate our Green Domestic product. This tells as to how much we have helped in rejuvenating the environment. Eg - Afforestation.

India has taken initiatives in accounting for loss of ecosystem services in a bid to enhance our move towards sustainability.

1. MOSPI (Ministry of Statistics and Program Implementation) releases Envistats manual that gives account for the same.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

2. Uttarakhand has become first state to calculate the green domestic product.

3. India favours 'Green growth' resulting into achieving intergenerational equity rather than merely intra generational.

4. The PHDI index (Planetary pressure adjusted Human Development Index) shows India's commitment to reduce environmental losses and balance economy with environment.

Therefore, NCAVES is a medium to frame just policies resulting in intensive production and attainment of UN SDG's.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

17. Rapid and unplanned urbanisation accompanied by population growth have increased both the risk and impact of natural disasters. Discuss the statement along with adequate measures to address the relevant concerns in India. **(250 words) 15**

जनसंख्या वृद्धि के साथ-साथ तीव्र और अनियोजित शहरीकरण ने प्राकृतिक आपदाओं के जोखिम और प्रभाव दोनों को बढ़ा दिया है। भारत में विद्यमान प्रासंगिक चिंताओं के निवारण हेतु यथोचित उपायों के साथ इस कथन की व्याख्या कीजिए।

Answer: The ongoing Chennai floods are the perfect example of rapid and mindless urbanisation with paying heed to environmental conditions.

1. The Chennai floods are not caused by extreme rains but due to following reasons-

→ Airport in Chennai has been built on wetland.

→ The canals meant for checking floods are itselves blocked by construction of highways

→ Increasing concretisation of wetlands and encroachment on rivers.

2. The landslides in Kerala's Idukki district were caused by -

→ Making houses on hill tops to accomodating growing population (given that we are in phase 3 of demographic cycle).

→ This causes disruption in natural slope of hills.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. Similarly, the Glacial Lake Outburst flood in Uttarakhand (Feb 2021) was ignited by construction of dams (Vishnugad). This disturbs ecology of area and obstructs the way of accomodating nature.

Adequate measures are required to address these concerns in India –

1. Making room for nature : We can do a comparative study with Netherland's model of Ruimte Voor De Rivier (making room for river) project.

2. Topographical planning : The planning of cities must not be in an organic fashion but must be combined by adequate geological, and hydrological studies.

3. Resolving the problem of census towns : These are unaccounted settlements that encroach on nature's land.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. Risk informed decision making : The UNDRR (UN Disaster risk reduction) framework calls for effective prevention of natural hazards caused by anthropogenic causes.

Reduce anthropogenic pressures
- → Building with nature
- → Rejuvenating wetlands and forests.
- → De-siltation and deepening of rivers.
- → Adequate mitigation plans as per geographical needs.
- → Formulating disaster reduction plans.

The recently launched GHTC (Global Housing Technology Challenge) and Lighthouse Project are correct steps in this regards.

Also, the rapid population growth needs to be adjusted by expanding vertically rather than horizontally.

Don't write anything this margin (कुछ भाग में कुछ ना लिखें)

18. National Hydrogen Mission can be a game changer for India's rising energy demands. Comment. (250 words) 15
भारत की बढ़ती ऊर्जा मांगों के लिए राष्ट्रीय हाइड्रोजन मिशन एक गेम चेंजर हो सकता है। टिप्पणी कीजिए।

Answer: Recently, IOCL (Indian Oil Corporation Ltd.) has started working for installing green hydrogen plant in Mathura oil refinery. This is a step further to fulfill the recently launched National Hydrogen mission by PM.

The National Hydrogen Mission can be a game changer in meeting our energy demands –

1. Our energy demands are bound to grow and peak by 2030 given that we are in phase 3 of demographic cycle.

2. Commitment to phase down coal: The on-going coal crisis all over world has revealed once again that coal is non-renewable and will exhaust sooner or later. This gives enough room for hydrogen.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. Fulfilling our COP26 commitments : We have committed to be net zero by 2070. In such a case, National Hydrogen mission serves as a stepping stone in achieving our target.

Uses of Hydrogen
- Flex fuel vehicles and e-mobility
- Methanol production - will drive our energy demands.
- Steel production - will reduce dependency on coal.
- Ammonia production

This will make us less vulnerable to oil prices globally.

4. Since hydrogen run vehicles represent the future of 'green world', therefore investing in technology and research becomes our key priority to meet energy demands.

However, we need to keep certain facts in mind before formulating policy in this regard.

1. Since 100% (approx) hydrogen is produced by natural gas in India.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

This will increase dependence on fossil fuel instead of reducing it.

2. Coal powers another 23% production of hydrogen. This enhances the coal prices.

3. Ramping up storage as well as production of green hydrogen and blue hydrogen (where CO_2 released is captured).

Therefore, National Hydrogen mission will greatly reduce India's dependence on fossil fuels to meet energy demands. This will engender sustainability and help in meeting SDG's. However, above mentioned points need to be kept in mind while formulating policy.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

19. Despite geo-strategic instability of its region and a keen awareness of the cyber threat it faces, India has made only 'modest progress' in developing its policy and doctrine for cyberspace security. Critically examine.
(250 words) 15

अपने क्षेत्र की भू-रणनीतिक अस्थिरता और इसके समक्ष विद्यमान साइबर खतरों के संबंध में व्यापक जागरूकता के बावजूद, भारत ने साइबरस्पेस सुरक्षा के लिए अपनी नीति और सिद्धांत विकसित करने में केवल 'साधारण प्रगति' की है। समालोचनात्मक परीक्षण कीजिए।

Answer: Cyber warfare is now recognised as 4th domain of warfare. This is proven by recent attacks by Chinese Shadowpad (Red Echo) on Mumbai's electricity grid.

Cyber threats to India
- → To critical infrastructure
- → 'Wannacry' ransomware in West Bengal.
- → Threats to electricity grids, hospitals, banks.
- → Disruption of life and attack on right to privacy.

↓ Shows our geo-strategic instability.

Even the recent Pentagon's report on China has warned India of the threats it faces ~~is~~ including cyber terrorism.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

India has made considerable progress in enhancing cyberspace security -

1. Cert-In (Computer Emergency Response Team)
2. Cybercrime Volunteer Program by Ministry of Home Affairs.
3. National Security Advisor's (NSA) office under PMO.
4. NCIIPC (National Critical Infrastructure Information Protection cell) under NSA.
5. International Co-operation with Bangladesh, USA and Israel on cyber-security issues.
6. Promotion of end to end encryption and using HUMINT (human intelligence) and SOCMINT (social media intelligence).
7. Propagating use of Public key infrastructure and quantum computing (using quantum dots - photons for transferring crucial messages)

National quantum computing mission is correct step in this regards.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

However, we need to put enhanced efforts and recognise the new domain of warfare.

1. Our public offices are still susceptible to cyber attacks.

2. Our National security doctrine does not mentions 'cyber threats'.

3. Lack of co-ordination between concerned ministries and departments.

Therefore, in my opinion, we need to frame our National security doctrine keeping in regards the increasing threats faced by cyber terrorism.

Along with this, we can opt for ethical hacking to find out the vulnerabilities in ~~our~~ our systems.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

20. Developmental interventions alone cannot play a defining role in the resolution of existing and protracted internal conflicts in various parts of India within a reasonable time frame. Discuss. **(250 words) 15**

भारत के विभिन्न हिस्सों में व्याप्त और दीर्घकाल से जारी आंतरिक संघर्षों को उचित समय सीमा के भीतर हल करने में केवल विकासात्मक हस्तक्षेप एक निर्णायक भूमिका नहीं निभा सकते हैं। चर्चा कीजिए।

Answer: The internal conflicts within India are present due to variety of reasons. Development being the foremost reason. However, only developmental interventions cannot shield us from internal threats. These remain multi-dimensional in nature.

1. Co-relation of development and law and order situation - Even when development is taking place, but extremists destroy our efforts by attacking on them.

2. Solution lies within the problem approach - We need to understand the root cause of problem. This calls for participative decision making from bottom to top rather than merely top to bottom approach.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. Developing skills and leadership abilities among youths. This will reduce unemployment which is thrice as high as in rest of India.

4. Perception management - We often consider them as outsiders which results into increasing alienation with our homeland.

5. Making them pearls of same thread which binds India togther. The North East people are often discriminated - eg Bangalore ~~exd~~ exodus in 2017. This enhances the hiatus and results into internal conflicts.

6. Connection with terrorism outfits and arms smuggling.

7. Creating trust among people.

8. ~~Saying~~ Engendering good governance approach.
Eg: IAS OP Chaudhary has built tribal schools in North East along with maintaining law & order.

9. Respecting the differences instead of trying to fill them.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

we often try to homogenise tribals in one culture. This increases their resistance towards India.

Our approach

- Development from bottom to top.
- Prevent unholy nexus
- Involve people as to what they want
- Respecting ethnic differences and treating minorities with repect
- Holistic approach by reducing administrative roadblocks

Therefore a well co-ordinated, integrated, multidimensional approach is required to bind India together resulting in Internal consolidation.

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GENERAL STUDIES (TEST CODE : 1864)

Name of Candidate	Khushhali Solanki		
Medium Eng./Hindi	English	Registration Number	1214161
Center		Date	

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
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10	10	
11	15	
12	15	
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14	15	
15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न–पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI**
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न–सह–उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

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EVALUA

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. Agristack can serve as a foundation to build innovative agri-focused solutions, thus enabling creation of a better ecosystem for agriculture in India. Comment. Also, discuss the concerns associated with it.

(150 words) 10

एग्रीस्टैक अभिनव कृषि-केंद्रित समाधान प्रदान करने के लिए एक आधार के रूप में कार्य कर सकता है, इस प्रकार यह भारत में कृषि के लिए एक बेहतर पारिस्थितिकी तंत्र के निर्माण को सक्षम बनाता है। टिप्पणी कीजिए। साथ ही, इससे संबंधित चिंताओं की भी विवेचना कीजिए।

Ans. NITI Aayog and Ministry of Agriculture have recently rolled out the Agristack, also called as farm stack. It is collection of data associated with farms - including land records, convergence of schemes, type of crops, insurance etc.

Agristack
- → Soil health card
- → Climate related information
- → Digitization of land records
- → Faster, efficient, quick decision making
- → Management Information systems (Market prices of crops etc).

It will create better agri-focussed solutions by-

1. Helping in evidence based decision making.
2. Bringing all related information at one place.
3. Precision farming, etc.

However, the concerns associated with it are-

1. Monopoly of corporate sector - The market may become buyer based instead of seller based. Since the corporates will already know which crop is grown by farmer so they may manipulate it's prices.

2. Data protection and security issues, and breach of privacy.

Therefore, we need to enact the data empowerment and protection architecture (as proposed by NITI) along with empowering the farmers on the potential benefit of agristack. More extension workers need to skill the farmers in using it.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

2. Despite the advantages of geothermal energy, it has not been adopted on a wide scale in India. Discuss. (150 words) 10

भूतापीय ऊर्जा के लाभों के बावजूद, इसे भारत में व्यापक पैमाने पर नहीं अपनाया गया है। चर्चा कीजिए।

Ans. Recently ONGC has opened up geothermal energy conversion plant at Puga valley in Ladakh. Geothermal energy is derived from the heat preserved inside Earth, used to convert it into electrical energy.

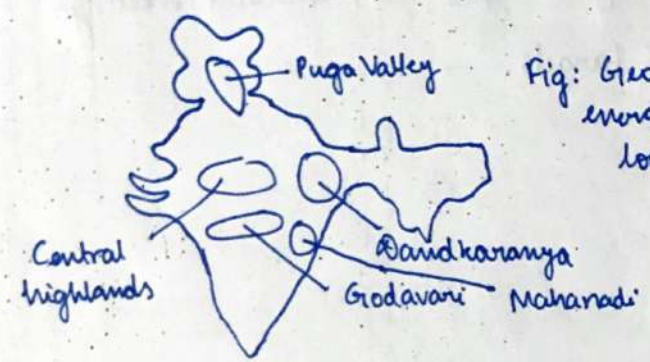


Fig: Geothermal energy locations

Despite the advantages it has not been adopted on a wide scale in India, because-

1. Lack of development of technology in harnessing the geothermal energy.
2. Lack of infrastructural development - in terms of pipes and grid connectivity.
3. Lack of an effective policy about harnessing geothermal energy.

4. Lack of research and development - given that we spend only 0.7% of our GDP on R&D.

Therefore, we need more concerted, integrated, co-ordinated approach for better policy formulation in this regards. Further, technology tranfer from Denmark, Germany will pave the way for harnessing it's potential, thereby meeting our COP26 targets.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. While the WTO seeks elimination of subsidies that contribute to IUU (illegal, unreported and unregulated) fishing, there are multiple concerns around it. Discuss while highlighting India's stand on the issue.

(150 words) 10

जहाँ IUU (अवैध, अनरिपोर्टेड या असूचित और अनियमित) मत्स्यन सब्सिडी को समाप्त करना संधारणीय मत्स्यन को सुनिश्चित करने हेतु परिकल्पित है, वहीं इसके इर्द-गिर्द अनेक चिंताएं विद्यमान हैं। इस मुद्दे पर भारत के रुख को रेखांकित करते हुए इसकी विवेचना कीजिए।

Ans: European countries had proposed to ban the IUU (illegal, unreported and unregulated) fishing at WTO (world trade organisation). This is the voice of all developed nations whose corporates are involved in fisheries sector.

But given for India, that 28 million of our people depend on fisheries, 90% of them belonging to unorganised sector. There are some concerns regarding it.

1. India wants to continue the special and Differential Treatment to support it's marginalised fish farmers.

2: India has proposed that the developed nations must no go beyond their exclusive economic zone (260 nm) for exploiting fishing. This has been accepted.

3. India will continue to support with giving subsidies to it's small fish farmers. However, we are strictly against the illegal, unreported and unregulated fishing.

The recent visit of WTO representative to India has assured that the voice of developing nations will be heard. Therefore, a policy that represents interests of all nations must be formulated in this regard.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. There is a view that the current agricultural policies in India are biased against rainfed agriculture. Comment. Also, identify government initiatives in this regard. (150 words) 10

यह विचार दिया जाता है कि भारत में वर्तमान कृषि नीतियां सिंचित कृषि के पक्ष में हैं। टिप्पणी कीजिए। साथ ही, इस संबंध में सरकारी पहलों की पहचान कीजिए।

Ans. Around 70% of Indian agriculture is rainfed or monsoon dependant. Only 30% is fed with irrigational channels and tubewells, much of which have already dried as ground water depletes.

Government's agriculture policies -

1. Per drop more crop - With the help of PM Krishi Sinchayi yojana.

2. Promotion of efficient water delivery channels like drip irrigation and sprinkler irrigation.

However, in regards with rainfed agriculture, government has initiated steps such as -

1. Water harvesting techniques - such as Baoli in Assam.

2. Har Medh Par Pedh - This translates to growing trees that help in conservation of ground water.

3. River linking schemes - Recently Ken Betwa linking was formulated. This will ensure better coverage in rainfed areas.

4. Four water concept - It is using local knowledge and participation by conserving river water, soil moisture, ground water and rain water.

5. Buldhana project in Maharashtra - where NHAI has dug pits to take out the mud for construction of roads. While these pits serve as store of rain water.

Therefore, government is trying to cover more areas under irrigation and simultaneously promoting farming techniques suited to the agro-climate zone of the area.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

5. Enumerate the major causes behind marine heatwaves. Also, discuss their impact on the ocean ecosystem. **(150 words) 10**

एकल-उपयोग वाले प्लास्टिक क्या हैं और ये पर्यावरण के लिए खतरा क्यों हैं? भारत में एकल-उपयोग वाले प्लास्टिक को चरणबद्ध रीति से समाप्त करने से संबंधित चुनौतियों पर चर्चा कीजिए।

Ans. The recent study published in Journal 'Nature' highlighted that marine heatwaves are a growing cause of concern both for biodiversity and whole ocean ecosystem.

Marine heatwaves → Increase in temperature of ocean by 5-6 °C → Prolonged exposure to heat → Disturbs the natural marine ecosystem

The impacts on marine ecosystem are as follows-

1. Damaging of coral reefs (Increased bleaching) -

It is found that algae are leaving the corals due to prolonged heat resulting into coral bleaching.

Coral bleaching → Loss of fishes that depend on them → Increasing marine disasters → Coastal squeezing → Loss of livelihood of farmers

2. Impact on marine animals - The fishes are unable to adapt to increasing heat since this means increased demand of oxygen which their gills are not capable of performing.

3. Loss of seals due to melting arctice ice caps - This results into loss of population of polar bears.

4. Increased attack of invasive alien species and growing of weeds that cause eutrophication. This blocks sunlight and depletes oxygen levels.

Therefore, we need to reverse the causes behind increasing heat waves. The causes are - increased global warming (already 1.2°c higher), dumping of warmer effluents from industrial wastes, diversion of fresh water, release of Green house gases, weakening of magnetic field due to which Sun rays enter directly, hole in ozone layers etc are the causes.

Therefore we need to adhere to our COP 26 commitments to limit the anthropocene effect on marine ecosystem.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

6. Aseismic structures are touted as a viable solution to combat earthquake destruction. In this context, highlight the need of a National Program on Seismic Retrofitting of Buildings and Structures in India. **(150 words) 10**

भूकंप के विनाश से निपटने के लिए भूकंपीय संरचनाओं को एक व्यवहार्य समाधान के रूप में माना जाता है। इस संदर्भ में, भारत में भवनों और संरचनाओं के भूकंपीय पुनर्निर्माण पर राष्ट्रीय कार्यक्रम की आवश्यकता को रेखांकित कीजिए।

Ans. Earthquakes are violent, catastrophic and often destruptive shacking of Earth's crust. Approx 60% of our area is seismically active.

Therefore, to mitigate and prevent the ill-effects of Earthquake, aseismic structures are proposed.

1. Retrofitting of buildings - IIT Kanpur is undergoing research in this regards, given that Japan has successfully tested the technology.
2. Use of aseismic materials like flexible steel and making the structure monolith.
3. Using energy and shock absorbers in foundation to make the structure elastic.
4. Use of ball ~~too~~ bearings above pile caps, provides the scope for movement of building.

Therefore, in order to give effect to the above suggestions, we need to make an effective

National Strategy on Retrofitting of Buildings and Structure in this regards. The National Building code 2016 and Is code 1893 : 2002 will need to be reformed and redrafted on this basis.

Benefits of Retrofitting

- Prevent falling of roof even at Earthquakes greater than magnitude 10 on Richter scale.
- Prevents loss of lives.

Therefore, effective research, regulation and Policy formulation is the need of the hour.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

7. Despite the risks associated with cryptoassets, their underlying advantages should not be overlooked. Discuss. **(150 words) 10**

क्रिप्टो-एसेट्स से जुड़े जोखिमों के बावजूद, उनके अंतर्निहित लाभों की उपेक्षा नहीं की जानी चाहिए। चर्चा कीजिए।

Ans. Government (cabinet) has recently tabled the Regulation of Crypto Assets Bill. In this crypto currency is been regarded as crypto assets.

Government is not completely banning the crypto currency, but is allowing regulation of crypto assets exchange platform by SEBI.

Risks associated with crypto assets –

1. Use of cryptocurrency for illegal money laundering and terror financing.
2. Loss of revenue to state exchequer.
3. Lack of transparency, traceability, and monitoring over transactions done via crypto assets.
4. Lack of centralised control.

However, the flip side of coin presents certain advantages of crypto assets, which are as follows –

1. Using crypto asset as a medium of secondary investments - in terms of bonds and shares.

2. Using and harnessing the underlying blockchain technology. For example, in National Digital Health Mission, blockchain is used.

3. Prevent hoarding of gold.

Even government has said that it will not be banning crypto assets. Therefore, any decision must be made considering both sides of the coin.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

8. Virtual Reality and Augmented Reality (VR and AR) have massive innovation potential across a wide range of industries and research fields in India. Discuss. **(150 words) 10**

हालांकि, कृषि जैव प्रौद्योगिकी में हमारे कुछ सबसे महत्वपूर्ण मुद्दों के समाधान की अपार क्षमताएं हैं, लेकिन भारत में इसके विकास के समक्ष अनेक बाधाएं विद्यमान हैं। चर्चा कीजिए।

Ans: Virtual Reality implies creating a 3D virtual space that is separated from reality. Use of head-sets and remote controls is done.
Augmented reality, on the other hand is enhancement to the real world by using Artificial Intelligence & Machine Learning tools.

The innovation potential of AR and VR is as follows -

1. In medical field : It is now possible to attend a live surgery using AR headsets even in a crowded ICU.
Creation of holograms to engage the patients to help them recover better.

2. In space sector : Digantra is using AR and VR in order to fast track the efficient monitoring of space assets. This will promote space situational awareness.

3. In educational sector : Imagine Shaheed Vir Bhagat Singh ji's photo speaking himself about his journey in Nationalism and Indian freedom.
Even the learning has also become more interesting since students can now see things visually using AR and VR.

4. In defence sector : For assessing the terrains for deployment of missiles. It is also used for developing Akash like robots for bomb diffusion.
AR and VR are also the backbone behind the new frontier of technology i.e Metaverse. They can really transform the user experience and generate effective results.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

9. Discuss the role and functions of Narcotics Control Bureau (NCB) and examine whether the NDPS Act, 1985 needs to be remodelled.
(150 words) 10

नारकोटिक्स कंट्रोल ब्यूरो (NCB) की भूमिका और कार्यों पर चर्चा कीजिए तथा परीक्षण कीजिए कि क्या NDPS अधिनियम, 1985 को पुनर्निर्मित करने की आवश्यकता है।

Ans. Narcotics Control Bureau was set up under Narcotic Drugs and Psychotropic Substances Act 1985 in order to fulfil the DPSP enshrined under Article 47 of the constitution.

Narcotics Control Bureau
- → Conducting raids to stop the proliferation of harmful drugs.
- → Intelligence gathering about drug abuse.
- → Regulating and monitoring the the drug market.

The NDPS Act 1985 is recently been considered for amendment –

1. To decriminalise the personal holdings of drugs if found in small quantities.
2. To provide for stricter, efficient, effective monitoring of drug abuse cases in India.
3. To co-ordinate with neighbouring countries

to crack down on drug mafia.

4. Fixing the time limit for resolving the cases amicably.

In my opinion, we need to strictly enforce the proposed regulations. However, there shall be no legal loophole left in the law. For this, the definition of 'small quantity' must be well defined and civil society must be taken into confidence before amending this act.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

10. Recent events have raised concerns around the issue of surveillance in India. Do you think surveillance is a necessary evil to tackle crime and terror? Discuss the various arguments on the issue. **(150 words) 10**

हाल की घटनाओं ने भारत में निगरानी के मुद्दे को लेकर चिंता बढ़ा दी है। क्या आपको लगता है कि अपराध और आतंक से निपटने के लिए निगरानी एक आवश्यक बुराई है? इस मुद्दे पर विभिन्न तर्कों की विवेचना कीजिए।

Ans. Delhi has installed more than 2000 CCTV cameras in every nook and corner of the city to prevent any gender based violence. However, the concern for privacy has surrounded the positive effects of surveillance.

Arguments in favour -

1. This helps keep a check on the crimes committed against citizens.
2. Use of spywares by tracking phones of terrorists and insurgents will help to suppress the separatist tendencies.
3. It will help to ~~prese~~ preserve and protect National Security in case of any terror attack.

However, the flip side of the coin highlights the potential dangers of being a surveillance state.

Arguments against

1. This creates a surveillance state that compromises the fundamental right to privacy as said by SC in Puttaswamy judgment.
2. Tracking phones of journalists will make them exercise self restraint and will suppress democracy in the state.
3. Fear of getting monitored and recorded by using spywares will engender lack of trust among citizens against the state. This will suppress dissent.

Therefore, we need a balanced approach whereby surveillance must only be done for protecting national security. And this national security protection needs to be revealed before the court as said by SC.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

11. The decision to grow a particular crop by a farmer is affected by various factors other than the yield of a crop. Discuss this statement and assess the need for bringing a change in the cropping pattern in India.

(250 words) 15

एक किसान द्वारा किसी विशेष फसल को उगाने का निर्णय उक्त फसल की उपज के अतिरिक्त विभिन्न कारकों से प्रभावित होता है। इस कथन की विवेचना कीजिए तथा भारत में फसल पद्धति (क्रॉपिंग पैटर्न) में परिवर्तन लाने की आवश्यकता का आकलन कीजिए।

Ans. The cropping pattern in India depends upon numerous factors like rainfall, groundwater availability, Minimum support price on crop, agro-climatic zone, availability of irrigation, demand of crop along with it's yield.

However, it is observed that the cropping pattern in our country is highly skewed in favour of water intensive crops like wheat, rice and sugarcane. This is especially the case of Punjab, Rajasthan, UP, Delhi and Haryana.

Result of this pattern
- Loss and depletion of groundwater
- Monocropping practices
- Reduced yields as it does not suit to agro-climatic zone
- Increased use of fertilizers
- Excess food grains that gets rotten due to lack of storage
- Loss of nutrients in the soil

Therefore, we need to promote a paradigmatic shift in the cropping pattern of India. It must include the following factors -

1. Suitabitability of the crop as per the agro-climatic zone of the region - For eg apples in Himachal Pradesh, coffee in South Kerala, Tea in Assam etc.

2. Improvement in the water use efficiency - Promotion of drip irrigation instead of tube wells that deplete ground water.

3. The minimum support price on crops - that must be raised for other crops and lowered on wheat and rice

4. Connectivity to the nearest mandi and presence of logistics infrastructure.

5. Government policies - Eg promotion of biofortification of crops (rice) by 2024. This will make a shift in cropping pattern.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

6. Cobweb cycle in case of pulse production as highlighted by economic survey.

7. Presence of nutrients in the soil and the invasive alien species that affects particular plants.

Therefore, we need to devolve evidence based policy making considering all the above points and involving all the stakeholders on a common platform to chalk out a solution. We need to promote intercropping, mixed cropping and organic farming that would result in both increase in yield as well as preservation of environment.

12. Identifying the importance of livestock in the Indian agricultural economy, enumerate the steps taken by the government in this regard. Also, discuss the potential impact of climate change on the livestock sector.

(250 words) 15

भारतीय कृषि अर्थव्यवस्था में पशुधन के महत्व को चिन्हित करते हुए, इस संबंध में सरकार द्वारा उठाए गए कदमों को सूचीबद्ध कीजिए। साथ ही, पशुधन क्षेत्र पर जलवायु परिवर्तन के संभावित प्रभावों पर चर्चा कीजिए।

Ans The recent livestock census of 2018 highlights that India has largest number of livestock in the world. It becomes the helping hand of farmer and increases the over income from the farm land.

Livestock → Cow, goats, sheeps
→ Buffalo
→ Pigs
→ Camels

Importance of livestock –

1. Provide additional remuneration to farmers in the lean season.
2. Bullocks help in harvesting and threshing of crops.
3. Fulfilling the nutritional requirements – Eg milk of cows and camels acts as twin purpose of curing disease and fulfilling nutritional requirements.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. Help in transportation of goods, man, material from one place to another. Eg. Camels in Rajasthan

The steps taken by government in conserving livestock are -

1. Conducting livestock census every 5 years to know the status and population of livestock in the country.

2. Creating a separate ministry of Animal Husbandry, Dairying and Fishing.

3. Rolling out schemes like Prevention and Elimination of Foot and Mouth Disease and Brucellosis in Cattle by 2030.

4. Promotion of Apiculture - Bee farming by forming National Bee Board.

5. Promoting food processing industries ~~to~~ that uses milk ~~whole~~ which provides additional income to farmers.

However, since the global average temperature has already risen by 1.2°C (as per IPCC 6th report), it has got adverse impacts on livestock.

1. Reducing yields from cattle and sheeps due to increased global warming.

2. Effects upon the breeding habits of livestock that has direct impact on their population.

3. Increased mortality rates due to high number of diseases attacking them. For this the use of diclofenac as pain killers were done that instead caused decline in vulture population.

4. Loss of livestock feed due to depleting forests and grasslands.

Therefore, we need to reverse the anthropocene changes to climate change. Also, need of Promoting Artificial Insemination and cross breeding of cattle for superior breed, along with adept research and development will help solve the problem.

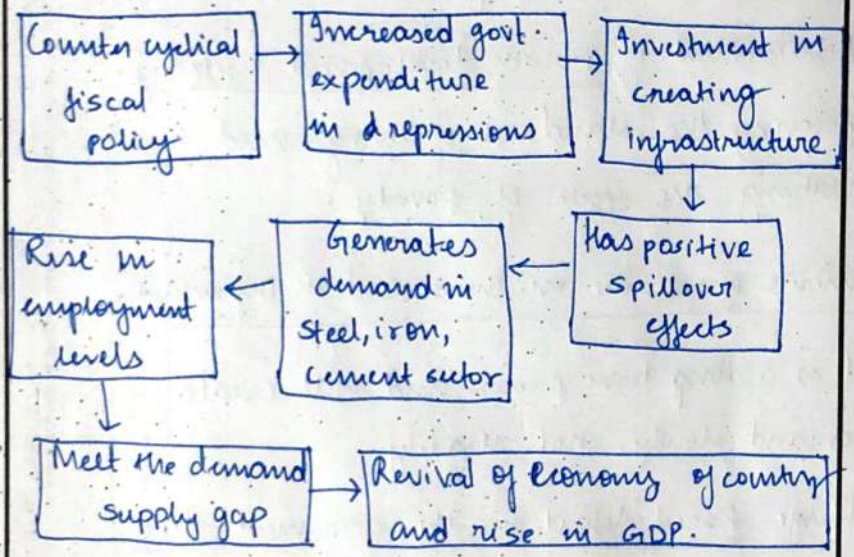
Don't write anything this margin (इस भाग में कुछ ना लिखें)

13. It has been argued by some economists that supply creates its own demand. In this context, discuss the merits and demerits of reliance on investment in infrastructure to boost the Indian economy.

(250 words) 15

कुछ अर्थशास्त्रियों द्वारा यह तर्क दिया जाता है कि आपूर्ति अपनी मांग को स्वयं सृजित करती है। इस संदर्भ में, भारतीय अर्थव्यवस्था को बढ़ावा देने के लिए बुनियादी ढांचे में निवेश पर निर्भरता के गुण एवं दोषों की विवेचना कीजिए।

Ans. Government has decided to adopt counter cyclic fiscal policy amid the pandemic, on the lines of John Maynard Keynes, in order to revive the economy.



Merits of investments in infrastructure are as follows -

1. This provides additional employment opportunity since 80% of the sector is unorganised.

2. Hardware infrastructure like roads, rails, highways etc generate the demand for other raw materials like cement and steel.

3. Increased expenditure on infrastructure translates to positive recovery in GDP levels.

4. Rise in income levels of labour, who will now create demand for other goods and services in the economy.

5. Achievement of growth development cycle by improving the standard of living and breaking the cycle of poverty.

Demerits of reliance on investment in infrastructure

1. It is a long term process and will create demand slowly, not steadily.

2. Huge fiscal deficit for the government - due to increased expenditure on capital formation.

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Therefore, in my opinion, the recently launched National monetisation pipeline will generate funds for investments in National Infrastructural pipeline. This will also reduce fiscal deficit along with generating employment to bandage our faltering economy.

14. Innovations emerge not just as an opportunity but also as a pre-condition to assure the sustainability of food production. Analyse the statement in context of the food processing sector in India. (250 words) 15

नवाचार, खाद्य उत्पादन की संधारणीयता को सुनिश्चित करने के लिए न केवल एक अवसर के रूप में बल्कि एक पूर्व शर्त के रूप में भी उभरें हैं। भारत में खाद्य प्रसंस्करण क्षेत्रक के संदर्भ में, इस कथन का विश्लेषण कीजिए।

Ans. Food processing refers to value addition to the primary raw material in order to enhance it's quality and value of the product. It is classified as the sunrise sector in India having huge potential for investment.

However, our food processing sector is in dire straits due to -

1. Lack of use of technology.
2. Lack of use of genetically modified crops.
3. Absence of Hazard Control and Critical points analysis.
4. Lack of promotion of food processing industries due to presence of stock limits.
5. Lack of backward and forward linkages in the sector.

Even when India acquire 4% of world's exports market in term of agriculture, only

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5-10% of that is by processed foods.

Therefore we need to promote innovations in the sector to ensure food sustainability -

1. Preventing the upward hazards from reaching downwards by controlling and monitoring the supply chains.

2. Supply chains suffer from a bullwhip effect whereby any fault at any point will get multiplied many times.

3. Provide adequate research and development in food processing sector.

4. Meeting the demands of European and Western nations by adhering to sanitary and phytosanitary restrictions.

5. Developing infrastructure and backward tracking of the crops and fisheries. Demand of canned fishes is very high and it is double remunerative for farmers as compared to raw fishes.

6. Promotion of effective technology and connecting farmers directly with the food processors in order to bypass the middlemen.

7. Promoting contract farming on a model basis for improving food processing.

Therefore, we need to harness the potential of increasing demand of processed food all over the world. This will help us double farmers income and also ensure sustainability.

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15. The factors contributing to unemployment in India are not merely a result of the structural issues related to the Indian economy. Discuss. Also, highlight the measures taken to address the problem of unemployment in recent times. **(250 words) 15**

भारत में बेरोजगारी को बढ़ावा देने वाले कारक केवल भारतीय अर्थव्यवस्था से संबंधित संरचनात्मक मुद्दों का परिणाम नहीं हैं। चर्चा कीजिए। साथ ही, हाल के दिनों में बेरोजगारी की समस्या के समाधान के लिए किए गए उपायों पर प्रकाश डालिए।

Ans. Everyyear, India adds 2 crore population to the pool of eligible youth in the working age population as per the CMIE (Centre for Monitoring Indian Economy) report. However, only 37% of them remains employable.

Coupled to this rising pool of unemployment, the pandemic has hit hard the ~~org~~ un-organised sector.

The various reasons for existence of unemployment are as follows -

1. Early deindustrialisation (As highlighted by Arvind Subramaniyam) - We shifted towards the service economy without peaking our industrial output. This has rendered crores of people unemployed.

2. Focus on capital intensive sector rather than labour intensive sector - Since the former boosts our GDP, while the later provides employment to the masses.

3. Lack of up-skilling and re-skilling amid the Industrial Revolution 4.0 that we have entered.

4. Feminisation of agriculture - due to migration of men towards towns. But in pandemic, the increased burden of care work has thrown women out altogether of labour force.

Measures taken by government to promote employment opportunities -

1. Rolling out of PLI (Production linked incentive) schemes - that focuses upon labour intensive sector like textile as well.

2. Being part of Supply chain resilience initiative - This will help connect ~~our~~ our MSME's with the world.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. Boost to sh. schemes like Assemble in India that has increased FDI in the country.

4. Providing skill gap mapping and analysis to the migrant labourers for finding relevant jobs. Eg- ASEEM portal

5. Adopting the counter cyclical fiscal policy by increasing investment on infrastructre sector. This will raise the employment levels and will generate demand.

Eg- National Infrastructure pipeline.

Therefore, such efforts by government in promotion of labour intensive jobs (Agarbatti, handlooms etc) ~~with~~ are a step in right direction. This will help us achieve the growth development cycle.

16. Highlighting the major announcements made by India in the recently concluded COP26, examine India's capabilities in achieving net zero emissions by 2070. **(250 words) 15**

हाल ही में संपन्न COP26 में भारत द्वारा की गई प्रमुख घोषणाओं पर प्रकाश डालते हुए, वर्ष 2070 तक शुद्ध शून्य उत्सर्जन की स्थिति प्राप्त करने में भारत की क्षमताओं का परीक्षण कीजिए।

Ans. COP26 to UNFCCC was recently concluded in Glasgow, Scotland. Efforts were made by all countries ~~to~~ according to CBDR-RC (Common But Differentiated Responsibilities) in order to achieve Paris Agreement.

Announcements made by India are as follows-

1. Achieving net zero carbon emissions by 2070 - what we will release, will also be captured.
2. Achieving 50% of installed capacity by renewable energy by 2030. We have already crossed 40% mark in this regards.
3. Reducing the carbon emission intensity by 45% of the GDP.
4. Reducing 1 billion tonne of emissions.

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India posses the required capabilities in order to achieve the net zero by 2070. The efforts made in this regard are as follows -

1. Promotion of electric vehicles in the country - Recently 22000 charging stations have been set up. Also NITI Aayog has asked RBI to include EV's in the priority sector lending norms.

2. Promotion of Green Hydrogen energy plants - It involves production of hydrogen using renewable energy. ~~and~~ Recently ONGC has established plant in Mathura refinery. Also National Hydrogen mission is rolled out.

3. Promotion of bio-ethanol and bio-diesal - Blending 20% ethanol in petrol by 2025 by formulating the National Biofuel policy.

4. International Solar Alliance - Promotion of ~~sol~~ harnessing the solar cells and solar energy to reduce dependence on fossil fuels.

5 Mechanisation of farming and promoting efficient techniques to reduce carbon emissions from agriculture.

6. Promotion of carbon capture and storage technology with assistance from Netherlands and Germany.

Therefore, moving on the same path and doing our concerted efforts will help India reduce her carbon emissions and become net zero by 2070.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

17. While geography plays a definite role in the recurring disasters in Western Ghats, it is the human intervention that has exacerbated them. Discuss. Also, suggest measures to protect Western Ghats from these frequent disasters. **(250 words) 15**

यद्यपि, पश्चिमी घाट में बारंबार आपदाओं के घटित होने के पीछे भौगोलिक स्थिति एक निश्चित भूमिका निभाती है, तथापि मानवीय हस्तक्षेपों ने उन्हें और बढ़ा दिया है। विवेचना कीजिए। साथ ही, बार-बार आने वाली इन आपदाओं से पश्चिमी घाट को बचाने के उपायों का सुझाव दीजिए।

Ans. Recently, the landslides in Idukki district of Kerala and the floods in Mumbai have have highlighted presence of anthropocene era to create frequent disasters.

Recurring disasters

Natural causes
- Topography
- Instability
- Heavy rainfall
- High slopes
- Heigh seismicity

Anthropogenic causes
- Encroachment of rivers and wetlands
- Cutting along the hill slopes to adjust our growing population
- Conversion of forest land to agricultural land.

Due to increased human intervention, the anthropogenic reasons trigger the natural causes and create disasters.

a. Building of Wayanad Tunnel - It's Environment Impact Assessment has not yet being cleared.

b. Construction of dams on rivers in sensitive zones. This results in seepage of water in the nearby soil and increases the fragility of the ~~reos~~ region.

c. Building on seismically active zones by cutting across the hill slopes - This gives rise to landslids.

The measures required to prevent these disasters are as follows -

1. Preventing global warming that contributes to increased sea level rise.
2. Adherence to coastal zone regulation ~~rob~~ rules with stringent monitoring of the same.
3. Mandatory public hearing and Environmental Impact Assessment before making any projects.
4. Building with nature - For example Ruimte Voor De Rivier project in Netherlands. This

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involves giving enough breathing space to the rivers and wetlands and preventing and encroachment on them.

5. Declaring the highly fragile area as ecologically sensitive area (25% as recommended by Gadgil committee).

Therefore, we need to adopt topographical planning and build the projects suiting the environmental concerns such that both go hand in hand together.

Introduction patented

18. The IPR regime in India is mired by inadequate protection and ineffective implementation. In this context, discuss how the IPR regime can be made more robust and effective. (250 words) 15

भारत में IPR प्रणाली अपर्याप्त संरक्षण और अप्रभावी कार्यान्वयन से ग्रस्त है। इस संदर्भ में, चर्चा कीजिए कि IPR प्रणाली को और अधिक मजबूत एवं प्रभावी कैसे बनाया जा सकता है।

Ans. Intellectual Property Rights encompass protecting the brainwork of a person with help of legal provisions, as also enshrined in UN charter.

IPR in India
- → Intellectual property rights policy 2016, 2018, 2020.
- → Signing of Madrid protocol to ensure copyright protection across borders

However, the IPR regime in India has remained ineffective as also highlighted by EU nations and USA due to which we have not yet secured Free Trade Agreements with them. The reasons are as follows –

1. Dilution of provision of search and seizure with effective punishment on patent infrigement. This was done by 2018 amendment.
2. Presence of patent cliffs and evergreening of patents. Certain changes are

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Introduced in the existing product and again patented.

3. Provision for compulsory licensing in case of medicines etc when public interest outweighs profit motive.

4. The amount of time taken for processing on approving the patent application. It takes more than 8 months even at single stages.

Therefore, we need to revamp our patent protection architecture by following ways -

1. Providing for stringent punishments and giving back powers of search and seizure in case of patent infringement.

2. Fastening up the process for patent filing and processing of application. The IPR policy aims to bring it down to 1 month at each stage and 8 months in total.

3. Protecting patent infringement of foreign researchers.

4. Providing a conducive environment to file more patent applications. Eg. ASIIM Portal (Ambedkar social innovation & Incubation mission).

5. Strengthening the Madrid protocol by providing ready ground for patent recognition of international brands.

Therefore, we need to adhere to UN charter of protect the brainwork of individuals by strengthening the patent regime in India.

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19. What are the similarities and differences between the activities of terrorists and organized criminal groups? Also, elaborate upon the fact that their linkages occur in both tactical and strategic ways. **(250 words) 15**

आतंकवादियों और संगठित आपराधिक समूह की गतिविधियों के बीच समानताएं और असमानताएं क्या हैं? साथ ही, इस तथ्य पर सविस्तार चर्चा कीजिए कि उनके संबंध सामरिक और रणनीतिक दोनों तरीकों से होते हैं।

Ans. Terrorists are those that aim to create terror in eyes of common people and prove themselves in front of the state. They tend to spread their ideology by involving in terror attacks.

Organised criminal groups ~~used~~ are those which have organised, systematic, structured and programmed network of supplying money. This is done in exchange of drugs, arms, cattles, weapons etc.

Similarities between terrorists and OCG -

1. Both industries thrive on illegal financing.
2. They have intricate connections where the money supplied to ~~OG~~ OCG is used to buy weapons by terrorists.
3. Both of them work against the state authorities.
4. They have a leader and work in an underground fashion.

Differences between them -

1. Terrorists conduct violence by harming the innocent victims via bomb blasts. Whereas the main aim of OCG is to earn money.

2. OCG may have linkages with big corporate houses. They may not have a particular ideology.

Their linkages occur in both tactical and strategic ways as -

1. The opium, drug and poppy cultivation enters India via Pakistan and Myanmar through Golden Triangle and Golden Crescent. The terrorists of Lashkar-e-Toiba and Jaish-e-Mohammad have direct linkages with them.

2. The money earned via cattle smuggling through Bangladesh borders becomes the basis for buying arms and ammunitions. These are then supplied to terrorists.

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3. The recent crackdown of Bangladesh government upon the fake Indian currency notes being circulated by OCG's. These OCG's were getting them with help of terrorists based in PoK.

Therefore, OCG and Terrorist organisation work hand in hand and threaten internal security of the state. We need co-ordinated and integrated efforts to fight this menace.

20. There is a view that the 'civil society is emerging as the new frontier of war', in the 4th generation of warfare. Do you agree with this view? Substantiate with logical arguments. **(250 words) 15**

ऐसा माना जाता है कि नागरिक समाज, युद्ध की चौथी पीढ़ी में एक नए मोर्चे के रूप में उभर रहा है। क्या आप इस विचार से सहमत हैं? उचित तर्कों के साथ पुष्टि कीजिए।

Ans. Recently the National Security Advisor, Mr Ajit Doval ~~ann~~ announced that civil society may emerge as a new frontier of war.
Civil society is defined as a group of people organised together for effective bargaining with the state as well as raising awareness among the people about policies of government.

Arguments in favour of civil society as new frontier of war -

1: Influence of ideology - This creates a false sense of being in minds of people forming the civil society.

2. Fear of getting divided, subverted and diverted from their purpose. Eg- in Pakistan, civil society played role in radicalisation of masses.

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Arguments against

1. Civil society helps in engendering peace - Eg amid the recent attacks on minorities in Kashmir valley, civil society took help of mosques to ensure peace in the region.

2. Civil societies represent the will of the masses and provide for upliftment of the people by proliferation of schemes.

3. Civil society has fed more people amid pandemic than the government alone.

4. Civil society in India protects the dignity of the woman. Eg - # Me Too Campaigns.

5. Provides medical helps in times of disaster management operations.

6. Ensures peace and stability in case of communal disharmony.

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Therefore, it cannot be denied that we face challenges due to increased influence of ideologies on civil society. They may even divert from their paths. So we need to prevent the same and use them as our strength instead of weakness.